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*The Horticulturist, and Journal
of rural art and rural taste*

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THE HORTICULTURIST

AND

JOURNAL

OF

Rural Art and Rural Taste,

DEVOTED TO

HORTICULTURE, LANDSCAPE GARDENING, RURAL ARCHITECTURE, BOTANY,
POMOLOGY, ENTOMOLOGY, RURAL ECONOMY, ETC.

ILLUSTRATED WITH NUMEROUS ENGRAVINGS.

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THE
HORTICULTURIST.

VOL. XIX.....JANUARY, 1864.....NO. CCXI.

Hints on Grape Culture.—XXXIII.

WE propose now to extend the renewal system, and carry it to what may be called the full-armed renewal. To do this, it will be necessary to erect a trellis, for stakes will no longer answer the purpose, since the arms, when extended, will meet each other. This system, therefore, oversteps the point of economy originally made, and in other respects is not as good as the system first described. Its extension, however, seems to follow naturally, and it is not without its merits. Taking the vine as we left it in our last article, or as seen in *Fig. 1*, p. 362, the two end canes are to be grown during one season, to be laid down the next for the extension of the arms. From the additional arm thus laid down, upright shoots are to be taken in the manner already described. There will be four shoots on each arm. The vine will then present the appearance shown in *Fig. 1*. The illustration does not show the different stages in the process of forming the arms and bearing shoots, but rather the appearance of a vine, the arms of which had been laid down by one operation; but after what has heretofore been said, the reader will doubtless understand

the process very well. Let us suppose the illustration to represent the vine at the end of the first season after the arms have been completed: the pruning will consist in cutting the canes *m*, *e*, *g*, and *p*, at the point *i*, and shortening in the other canes to about two and a half feet long. These will be the bearing canes for next year. The length of these bearing canes, however, must be regulated by the condition of the vine; and this is especially important during the first and second bearing years. The young vineyardist must be careful not to let his vines overbear. Many a good vine has been ruined by being allowed to carry too heavy a crop; hence the caution can not be too often repeated.

If the bearing canes are allowed to remain upright when the buds break, the fruit will set mostly at the top. It is necessary, therefore, to bend these canes down, as described in a former article, if it is wished to have the fruit set uniformly along the cane. Some special directions and illustrations are needed on this point, which we shall give hereafter.

As soon as the fruit has set, the ends of the bearing shoots must be pinched out.

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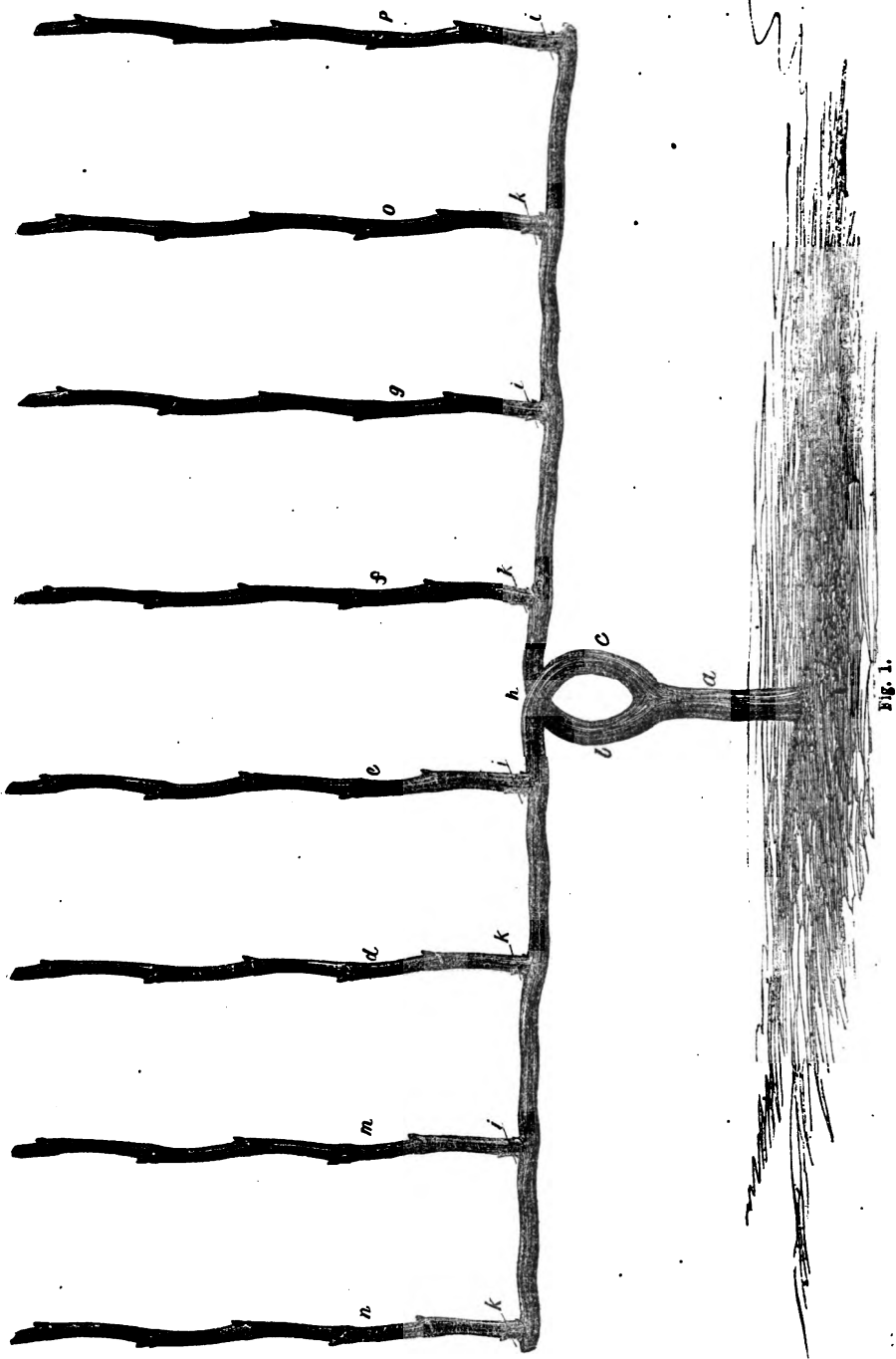


FIG. 1.

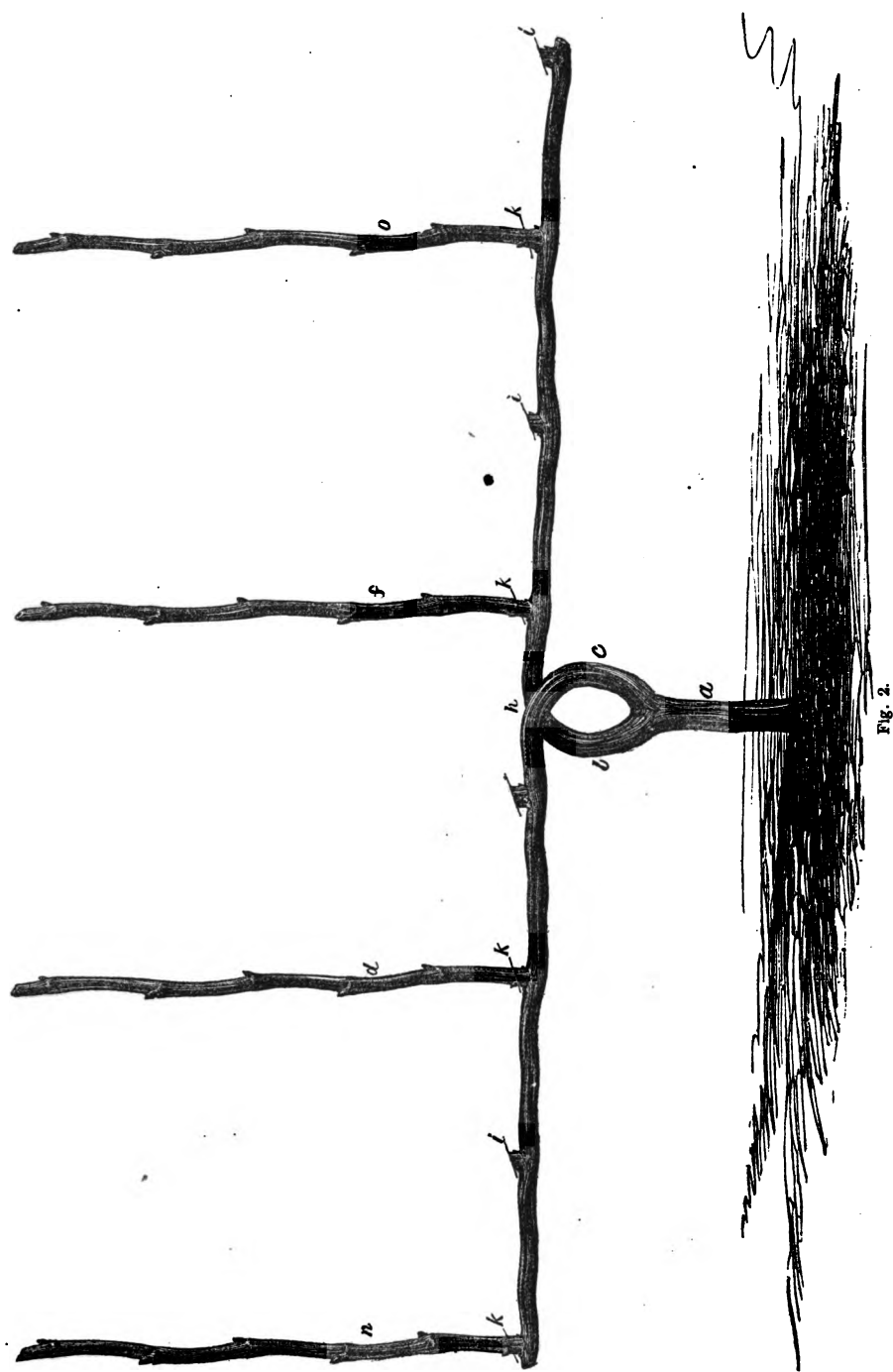


Fig. 2.

The laterals, also, must be pinched in. The process of pinching is just the same as described in our last article. The strength of the vine must be reserved for the fruit and the canes that are to bear next year. *Fig. 2* shows the vine as pruned.

From the points marked *i* one shoot must be taken. If two push, as will sometimes happen, the strongest is to be reserved, and the other rubbed off. These shoots must be treated like single canes, pinching in the laterals, and tying up the shoots as they progress in growth. Early in September the ends of these shoots may be pinched out, to help the development of the buds and the ripening of the wood. It is these shoots that are to bear the fruit next year.

The next pruning will consist in cutting out the canes that have fruited, and short-

ening in those that are to fruit. The canes *n*, *d*, *f*, and *o* are the ones that bore fruit this year; they are consequently to be cut off at the points *k*, from which new shoots are to be grown for fruiting next year. The system consists in fruiting yearly each alternate cane, and getting a new shoot from the base of that which fruited the preceding year. The canes that have fruited are cut down, and the others shortened to the capacity of the vine. This is substantially the system first described by Mr. Hoare. Where it is adopted, it would be better to establish it gradually, the best way of doing which we may hereafter describe. We had no idea of illustrating it in this way, till we extended the arms of the single cane, and then the system seemed to work itself out naturally.

LETTER FROM MR. THOMAS HOGG, FROM JAPAN.—NO. V.

WE take great pleasure in laying before our readers another letter from Mr. Hogg, full of the most interesting particulars relating to horticulture. It will be noticed that he speaks in warm terms of *Lilium auratum*, more bulbs of which are now on their way home. It is a fine thing, and we hope may soon become common. Mr. Hogg's friends will be glad to learn that he is well, and industriously employed in hunting up novelties.

KANAGAWA, Japan, *Sept. 8, 1863.*

MR. EDITOR:—The exclusion of foreigners from the great cities of this country, where, as in other countries, the art of horticulture, as well as other arts of civilization, are to be found carried on most successfully, and in the greatest perfection, renders the means of observation and comparison very limited. Those who pursue the business here are not cultivators to any extent, having but small premises for the sale of plants, all of which are brought from Yedo. The demand is very consid-

erable for ornamenting the grounds belonging to foreign residents, and must be a source of much profit, (estimated at the value of things among themselves,) to the dealers. A large quantity are taken away in Wardian cases by officers of vessels and visitors returning home, few of which probably survive. In consequence of this demand, and its natural result, to bring into the market a greater variety, I have the impression that we are pretty well informed of what they chiefly cultivate.

As I mentioned before, it is remarkable, considering their isolated condition and past exclusiveness, the number of introduced plants that are cultivated. *Gardenia florida*, *G. radicans*, *Manettia cordata*, *Vinca rosea*, *Lagerstrœmias*, *Pomegranates*, *Hoyas*, *Oleanders*, &c., are common.

Among the chief novelties I have met with the past spring and summer are the Primroses, of which there are two species (?) or very distinct varieties; one having flowers about the size of a well-grown Chinese Primrose, and in color o-

various shades of purple, plain, and mottled with lighter shades. The other species sends up a strong footstalk, with a crown of flowers on the top, after the manner of a Polyanthus. This footstalk still continues its growth, producing another crown of flowers before the first fades, and so continuing until a third and a fourth are produced in succession. The flowers are also of a purple color, but not so large in size as the first. The leaves of both species are more nearly alike to the Polyanthus than to the Chinese Primrose, and probably the plant requires the same treatment. They will doubtless prove decided acquisitions to the list of early spring flowers.

Another novelty I have met with is a *real* *Deutzia sanguinea*. This plant, you know, although long enumerated in nurserymen's catalogues, has hitherto proved a horticultural myth; at least, after frequent endeavors to procure it, I found it so. You may imagine my delight in finding it, and with *double* flowers at that. It is a double garden variety of *D. scabra*, the back of the outer petals being a decided pink color. As an addition to the shrubbery, or for early forcing for bouquets, it will prove invaluable.

While these and others in their turn excited my admiration, the greatest of all was *Lilium auratum*, which I notice has already been introduced into the States. Never having read any description of it, I was surprised, when I first saw it, that so conspicuous a plant, and so easy of introduction, had been passed over so long; and expressing myself so to a friend who is much interested in horticultural matters, he showed me a figure of it in *Curtis's Botanical Magazine*. It is a superb lily, and deserves all that has been said in its praise. It is plentiful among the hills a short distance from here. *L. lancifolium* I have not seen growing wild; and on inquiry of an intelligent Japanese gardener, was informed that it is only cultivated. Whether it is only a variety of *L. auratum*, as is suggested, has an appearance of pro-

bability, only that seedlings from it retain all its marked characters.

The many different varieties of *Ardisia*, unknown with you, are very attractive, not only for their peculiar variegations, but also for their various forms of foliage. They are considered rarities, and consequently are highly valued. I anticipated finding some new and distinct varieties of *Azaleas* in the season of their bloom. In this I was disappointed, seeing few or none equal to those cultivated in the green-houses at home. Those chiefly grown are of the *Azalea lateritia* and *Az. punctata* style.

One of the neatest variegated leaved plants I have seen is a small, low growing Rose, the leaves of which, in the spring and early summer, are distinctly and beautifully margined with white, with occasional pink stripes. A low growing *Euphorbia*, with leaves mottled with red, white, and green, is also a very neat plant; and if, as I am informed, it is a perennial, it will be an addition to the cold frame, if it is not hardy enough for the herbaceous border.

The past spring and summer have afforded me an excellent opportunity of tasting the fruits in their season. The first that makes its appearance is the fruit of a species of *Rubus*, apparently more nearly allied to the Blackberry than to the Raspberry. It is of a light yellow color, small in size, with rather soft flesh. The flavor is peculiar, and somewhat insipid, but, eaten with sugar, becomes tolerable enough, and quite equal to some berries at home with high-sounding names that require plenty of the same material to render them palatable.

In the month of June, Apricots come in, and for two or three weeks are very abundant and cheap. There are several varieties, but all small, and about as deficient in flavor as early Apricots are apt to be elsewhere.

Before Apricots are entirely gone the fruit of the *Mespilus Japonica* is brought into market. It is a favorite fruit with the

Japanese, and large quantities are brought in daily. When ripe, they are very juicy, and have a pleasant sub-acid flavor, that may be compared to a fine ripe Harvest Apple. Their size, when in perfection, is about that of a medium sized Gooseberry. Towards the latter end of their season they become smaller, owing, probably, to the overbearing of the trees.

Following these come Plums, which remain in abundance several weeks. Of these, the variety is greater than of Apricots, and some of them equal in size and flavor to those brought into the markets of New York. None, perhaps, equal the Green Gages, or Golden Drops, and other *first-rate* sorts, but quite so to some classed as desirable second-rate Plums.

Somewhat reverse to the order with you, Peaches succeed Plums. Although of fair size and appearance, they are inferior in flavor. This may be partly attributed to the practice of picking all their fruits in a very green state. No fruit suffers more from this treatment than the Peach; yet it would hardly be possible, owing to the tenderness of their flesh, to bring them to market as they should be eaten, ripe from the tree. They are now nearly gone, and have become almost worthless from the injury done them by an insect of the *curculio* (?) kind, that stings the fruit and deposits its larvæ as does the *curculio*.

Muskmelons and Watermelons have also been abundant. The former are very inferior, and would not be tolerated on your table; the latter are fair, and would be better, only for premature picking.

Grapes and Persimmons are now making their appearance. The latter, next to the Grapes, are, in my opinion, the best fruit

we have; they certainly are the peculiar fruit of the country, and take the place of Apples in our own. Whether they would answer to make pies I do not know; but as the Japanese do not indulge in that home luxury, it does not enter into the estimate of their value.

I had almost forgotten to include Apples in the list of fruits brought to market for sale. Not many are brought in, and their season is soon over. They are a very small, early variety, and when eaten just at the right time, are very passable. Pears, too, are now coming in; those hard, granular, indigestible things you have seen, called the Chinese Sand Pear. As an ornamental tree it has its uses, but as a fruit it can not be recommended. Large quantities of them are consumed by the people. Different sorts are cultivated, one of which keeps all through the winter and spring following.

Until the present season, nothing has been done by foreigners for the introduction of finer fruits (except the Strawberry) into the country.

Last spring, Frank Hall, Esq., and Col. George S. Fisher, U. S. Consul, both made importations of trees from California. Between them quite an assortment of the best varieties of Cherries, Plums, and Pears has been introduced, and are now growing finely in their gardens. Their Peach trees, Grape vines, and a few minor fruits, unfortunately did not do as well. Others, no doubt, will be induced by their success to follow their example, and the best results, by means of private enterprises like these, may be fairly expected, and the introduction of choice fruits create new desires, and lend their aid in civilizing a barbarous people.

RESIDENCE OF THOS. H. STOUT, ESQ., IRVINGTON ON THE HUDSON. ;

BY MEAD & WOODWARD, ARCHITECTS, ETC., 37 PARK ROW, NEW YORK.

IRVINGTON is a noted locality for the being many fine examples of substantial, higher grades of country homes, there roomy, and elegantly appointed mansions.

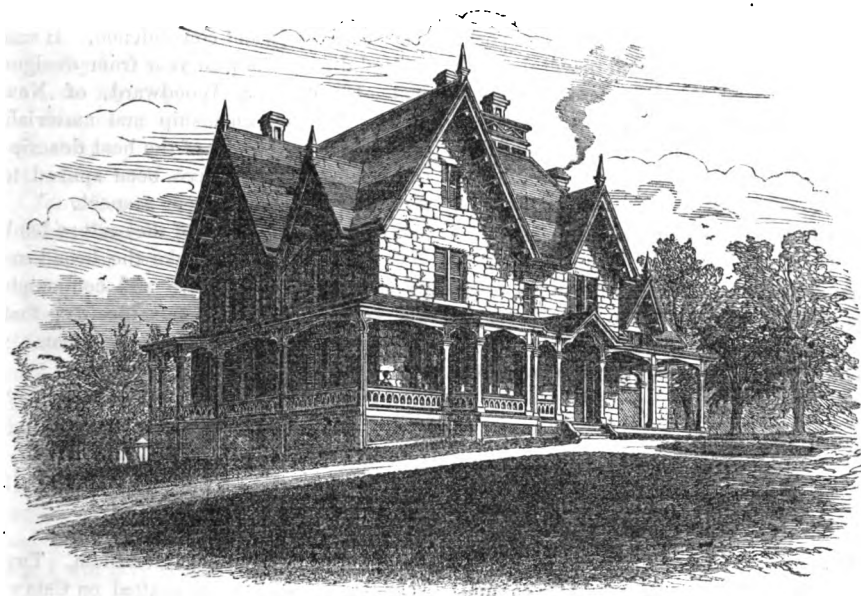


Fig. 56.—Residence of Thos. H. Stout, Esq., Irvington on the Hudson
Mead & Woodward, Architects, 37 Park Row, N. Y.

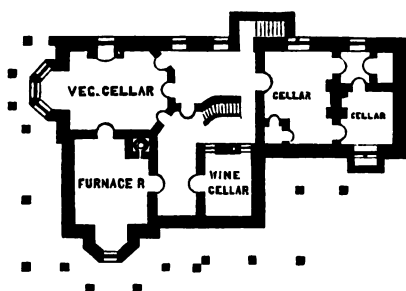


Fig. 57.—Cellar.



Fig. 58.—1st Floor.

Far within the gradually extending circle which limits the daily intercourse of the business man to the city of New York, it has become, in virtue of its position, healthfulness, fine scenery, and ease of access, one of the most favored of the suburbs of this city; a city whose rapid increase of population and corresponding decreasing comforts in conveyance from one portion to another, is turning the attention of those who like ease of transit, and the quiet and health of the country, to a residence among its beautiful and attractive

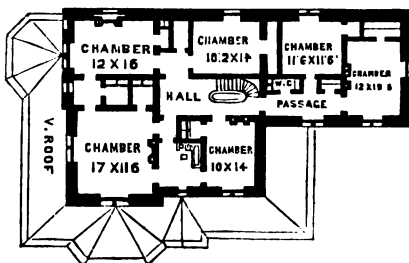


Fig. 59.—2d Floor.

suburbs. What the last two years have accomplished in introducing rapid and re-

liable communication, and building up and improving the country about New York, will probably be repeated several times over in the next decade. An impetus has been given to rural life, that will increase with every facility that is offered, and it will not be many years before the suburbs of New York will compare with any city in the world; and we question, even now, if elsewhere can be found a suburban locality comparable with the east bank of the Hudson, from New York to the Highlands.

The accompanying engravings illustrate a country house that embraces many of the

best features of exterior variety, and interior compactness and convenience. It was erected during the past year from designs made by Mead & Woodward, of New York. The workmanship and materials throughout have been of the best description, and no pains have been spared to make it first-class in every respect.

Situated on the slope of the eastern bank of the Hudson, it overlooks the broad expanse of "Tappan Zee," and commands the views peculiar to this locality, that reach from the Highlands to the ocean.

THE CONCORD AND THE DELAWARE GRAPE.

BY DR. H. SCHRÖDER, BLOOMINGTON, ILLINOIS.

MR. EDITOR.—I am not acquainted with the English language much, so you must excuse my style and correct my orthography; but I am acquainted with grape growing, wine making, and wine drinking. Reference, the State Board of Agriculture and Horticulture. But that is personal, and I had better stop here.

Well, I am acquainted, since five years, with the Delaware and the Concord here. The Delaware is a sweet and nice little grape for whoever can raise it; but this is the point with us in the West. I planted, five years ago, the first, "two years old, for immediate bearing." I gave it the best planting, and a treatment such as a young man will give his first sweetheart, and the result was, a blessing of two little bunches of the "blessed Delaware grape," both weighing $\frac{7}{8}$ of an ounce, apothecary weight. Four years ago the fever struck me hard, and I bought a good quantity of "two years old, raised from single eyes, cut back to five eyes." But it struck me when I unpacked them. I studied with my gardener, for a long time, to find the five eyes. With the help of my microscope I detected them, and—glory was in Germany! Three years ago I bought of another reliable firm in the East a good lot of Delawares; they looked

like good plants, and I planted them. Two years ago I bought some grafted on Catawba and Clinton, and last year and this year I planted and planted, but the "day of jubilee" never comes. But I tell you I am an old revolutioner, and never give up, as long as it goes for the right principle. *Next year I will give the good-begotten Delaware one more trial*, and then good-bye forever. Delaware man, now is your time. Show your good plants; send in your price-list for layers of old wood, and help to prove that the Delaware can be grown profitably in our country.

The Concord.—I have followed the articles written in the *HORTICULTURIST* by Messrs. Deliot and Husmann, and I place myself to the right of Mr. Husmann. I have raised the Concord since five years here, and it has proved to be a good, fast grower, a hardy grape, a good bearer, an early grape, and a grape for the people here. It is not quite free from disease, but it gives people a satisfaction. It makes a good, pleasant wine; but whether it will keep for a long time the future time must prove. It is not a wine for a wine-drinker; gives not this good tone to bar Neroes, like the celebrated Catawba, and not a wine like the fiery, amusing Norton's Virginia, (by-the-way, the

best wine in America.) Chorus will say Amen.

To-day I pressed a few Concord berries between my fingers, and I pressed out of the first berry sixty drops; out of the second, sixty-eight drops of pure juice. I did not expect such a high result, but I swear by John Brown that this is true.

Now, Mr. Editor, I have given you some facts about Delaware and Concord growing in my neighborhood. But this is not to say that the Concord is *the best grape*. If Catawba was free from disease, I would only plant Catawba in mass, and Norton's Virginia for wine only. My Catawbas did do well this year; so my Hartfords, Concords, and Norton's Virginia. But my Herbemonts were a failure. I have a collection of 160 different kinds of grape-vines, and next year, when they are all in bearing, I will give you a correct list, and what they have done. For to-day I must close. We have the *Horticulturist* for company, and Norton's Virginia wants my attention.

[We have for some time known you, Dr., as an enthusiast in grape culture. We regret, therefore, that you have been unsuccessful in growing the Delaware, the best of all native grapes. We are pleased to know, however, that you do not mean to give it up; and we hope that this time your efforts may be crowned with a great success. We hope so for the sake of the Delaware and your own; for right in McLean County the Delaware, grown according to our "Hints," succeeds as well as can

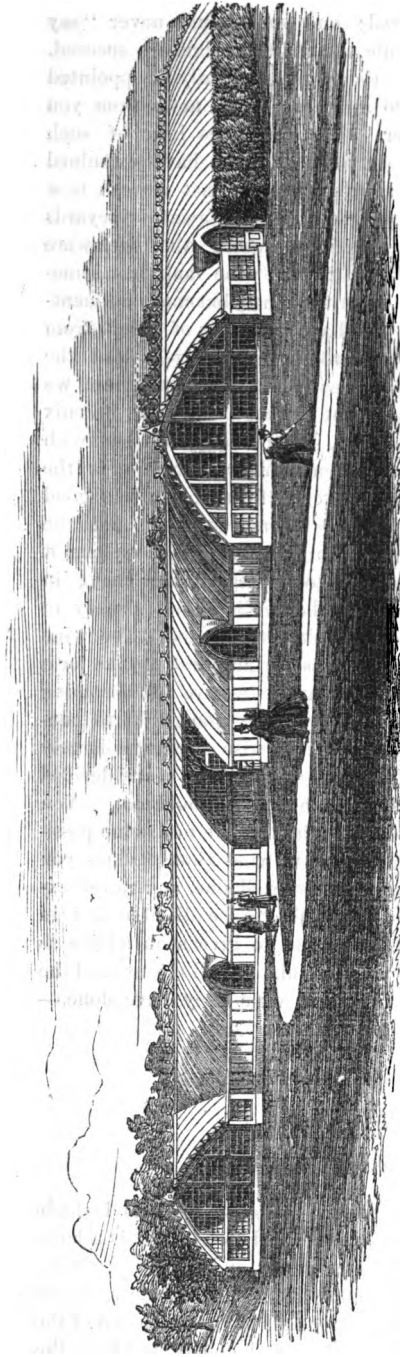
be desired; and you should never "say fail" while any of your neighbors succeed. We shall therefore be greatly disappointed if we do not hear better news from you hereafter. We sometimes hear of such cases near at hand, and have examined them; and the result is, that we can now show you several little Delaware vineyards in fine condition where the Delaware "would not grow." The fault has sometimes been in the vines, but more frequently not. We have a number of letters from the West, proving conclusively that the Delaware does grow there, and these we shall from time to time print. Mr. Phoenix failed at first, but he now succeeds with proper treatment. Your description of the Concord is a very fair one. It is a good grape, but by no means best; and the question for you to consider is, how long it will continue to be regarded as such; in other words, whether it is not already in the way of being supplanted. The wine made from it is certainly not a wine for a wine-drinker; and as we are fast becoming a wine-drinking people, you ought to consider whether it is wise to plant it largely for wine-making purposes. Our decided conviction is, that you should not. You must bear in mind that it makes no possible difference to us what kind of vines you plant, as we never sold one, and never expect to. We aim to be disinterested in such matters, and to give such advice as will be most useful. By all means send the list of vines and what they have done.—Ed.]

PLANT HOUSES—NO. VIII.

BY THE EDITOR.

WE give an example of a plant house this month, which in several particulars presents a striking appearance. *Fig. 1* is a prespective view. It was designed and built for Joseph Howland, Esq., of Matteawan, N. Y. Its broken outline is one of its most marked features, and

affords all the play of light and shade that an artist could desire. It is a large and imposing range of building, befitting the character of Mr. Howland's ample grounds. It stands at the north end of the kitchen garden, and conceals it from the dwelling, from which the range is in



Perspective View.
Mead & Woodward, Architects and Builders,
87 Park Row, N. Y.

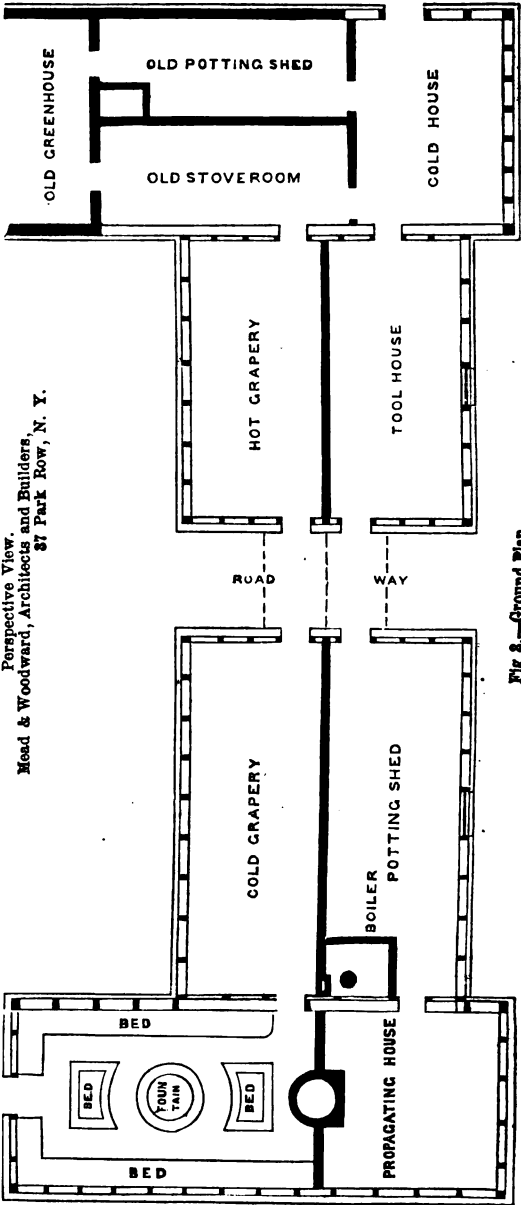


Fig 2.—Ground Plan.

full view. A part of the structure on the right, marked "old green-house," &c., was built some four or five years ago; the remainder, including the "cold house," is new. It will be observed that the range is divided into two parts by a road-way. The design of this was to enable the fam-

ily to visit the houses at any time in the carriage without exposure to the weather. From this road-way all the compartments of the range are accessible. Across the road-way, between the houses, is a handsome double gate, a sketch of which is given in Fig. 2.

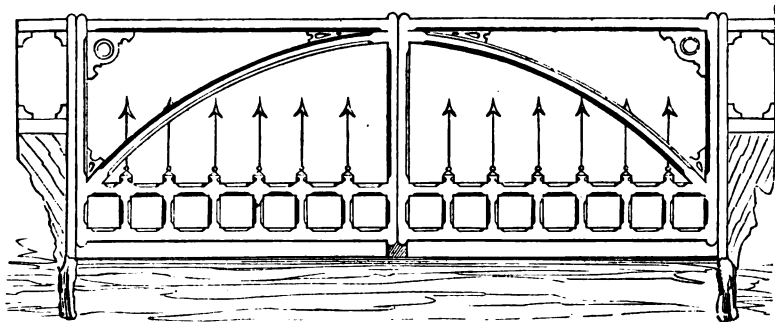


Fig. 2.—Double Gate.

The range is covered with a continuous curvilinear roof of low pitch, bedded in aquaria cement. The north side of the middle houses is covered with boards and

battened. End ventilation being impracticable here, top ventilation is increased so as to meet all requirements.

Fig. 3 is the ground plan. On the right

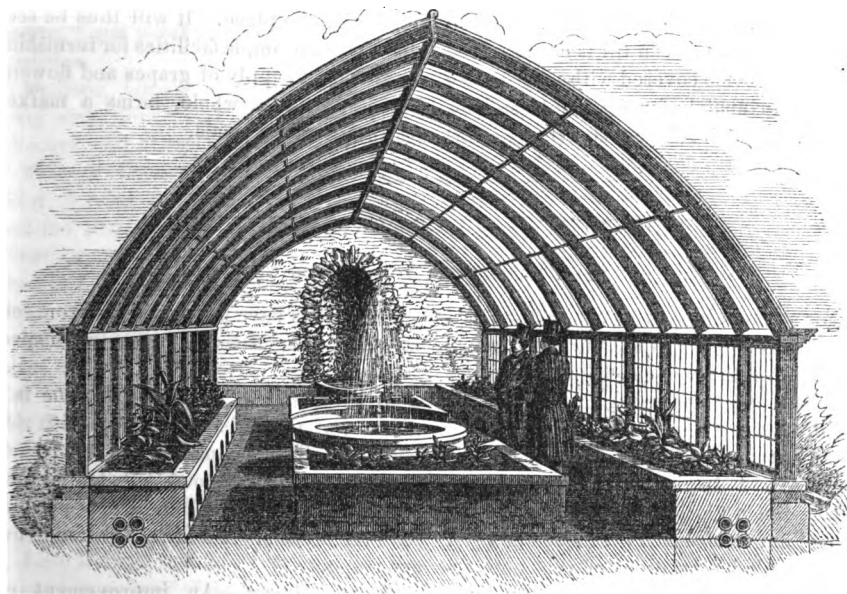


Fig. 4.—Interior view.

is the old green-house, communicating side, and with a hot-house or stove on one side, and with a boiler and potting-room on the other. At the north end, and com-

municating with these, we have on the north side a tool-house, under which is a capacious root cellar; on the south side a hot grapery, the foundation of which rests on piers, to enable the roots of the vines to run into the border on the outside. The arrangement of pipes for heating this house is very ample.

Crossing the road-way, we enter the cold grapery. The foundation of this also rests on piers, the border being outside. There are hot-water pipes in this compartment, to be used only to keep out frost. It may, however, be used as a "second" hot grapery. Passing out of the cold grapery, we enter what may be called the conservatory, its principal use being for the show of ornamental plants; and to this end it has several accessories which add much to its beauty. One of these which may be noticed is a neat fountain in the center; always a pretty feature wherever it can be introduced. Another is a rustic niche or alcove in the north wall, built of rough stones, over and through which the water constantly trickles into a basin. Its full beauty will not be seen till it has acquired age, and become covered with mosses and ferns. Fortunately for the plants and for good taste, there is no shelving in this

house. Beds are formed of brick, with a neat coping, in which the pots are set. This arrangement is much more effective than any manner of staging could possibly be. We have never been able to see either the beauty or utility of a series of narrow wooden steps for showing plants on.

In order to give the reader an idea of the interior of this apartment, we have prepared a perspective view of it. (See Fig. 4.) From this a good conception can be formed of the appearance and arrangement of the beds, fountain, &c.

Returning through the cold grapery, we have on its north side a boiler and potting room. The boiler pit is sunk beneath the floor of this room, and has connected with it a coal bin and shoot. Communicating with the potting-room is a propagating room, in the north end of the conservatory, and divided from it by a solid partition. It is provided with a hot-water pipe for furnishing bottom heat. It will propagate all the bedding and other plants needed on the place. It will thus be seen that there are ample facilities for furnishing an abundant supply of grapes and flowers. The house, as a whole, forms a marked feature of the grounds.

A DESCRIPTIVE LIST OF CHRYSANTHEMUMS.

BY A. RICHARDSON, FORDHAM, N. Y.

THIS season hitherto has been the finest for the development of the Chrysanthemum that I have known, the slight frosts we have had doing them no injury. They are literally gorgeous in the extreme. A finer dying out of the floral year can not be imagined. I know nothing to compare with it, but a glorious sunset of a closing day. I am so charmed with some of Peter Henderson's importations of this now deservedly popular flower, that I think you would like to know something of the varieties worth cultivating, taking it for granted that your numerous Grape and other fruit

engagements have prevented you from seeing and giving them your special inspection.

Of the *Pompone* varieties, *Coquette* is a picture, of peach blossom color, with rich golden or chrome center. Form so round, and petals so numerous, substantial, and compact, that children might play marbles with the blooms. A first-rate flower in every respect.

Brazen Mirror.—An improvement on Jonas. Color the same, bright chrome yellow with dark brown center, but superior in form, and comes earlier into bloom. A

very showy, distinct, and desirable variety.

Madame Ida Sayonet.—Rosy peach, of surpassing beauty of color; a free bloomer and of fine habit.

Moorie Carie.—Creamy in color during development, but when fully expanded a pure and beautiful white of first rate form and petal. This is quite an acquisition to the few good whites we have.

Ninette.—Of deep ruby color, good form, and an abundant bloomer.

Mrs. Dodd.—Good old "*Nelly*" improved, both in color and form, but not in time, being, like its parent, late in showing its beauties.

La Sibyl.—"Gold is dull" compared with its peculiar shade of color, which is rich, beautiful, and pure. We have nothing exactly like it, which makes it of value to the yellow class. In all other points it is likewise perfect.

Antigone.—Is another gem of peach blossom color, each petal having a sharply defined white edge, producing an extremely chaste effect. It is built similarly to "*Cocquette*," and possesses all the same good qualities.

Madame Larocque.—Deep rosy lilac, of good size, form, and substance; a free bloomer, and of fine habit.

King of Chestnuts.—A misnomer as to color, having too much red and yellow, and too little brown, to be placed in the chestnut class; and under present circumstances I doubt if its other qualities entitle it to the honor of "king;" but I will not decide till after another trial. My plant having prematurely cast its foliage, and looking sickly, the true character of the bloom may be affected.

Orange Boven.—Its name tells its color; very similar to "*Miss Lane*" of last season, in form and petal, but brighter in color.

Of the *Large Flowering* varieties,

Lady Russell must take the lead, being in every respect one of the most perfect of the tribe. It is unique in color, the inner side of the petal being of pale silvery purple; the outer many shades deeper, tipped with

pure gold, and gracefully incurving, produces an enchanting effect. The harmony of color is perfect, and it retains its Dahlia-like form to the last. If the importer don't sell a thousand of it next season, I am no prophet.

Dr. Brook is another very superior flower, also finely incurved; of pale Indian red, shaded and tipped with gold, producing a subdued orange effect, very quiet and beautiful. Quite new in color, and unlike any thing we have.

Model is of the same, but deeper colors; incurves splendidly, but not enough to conceal large hollow centers; therefore it is no model for me.

Miss Slade, of pale amber color, the exact shade of *Leda* of last summer, but has the advantage of being beautifully incurved. A gem.

St. George, a deep shade of orange, with a dash of cinnamon. A new color. It has not yet fully developed itself with me, but bids fair to be good in other points.

Orado.—Deep red, incurved, a fine showy flower.

I do not think you noticed last year's importation, some of which stand unrivaled; for instance,

Madame de Vatry, (pompones,) lilac, dark center; splendid in form and color.

Viscount de Camout, red shaded yellow; *superb* in all points.

Lady Harding, (large flowering,) lilac, gold tip, incurved; a *first class flower*.

Little Harry, brilliant golden yellow; also first rate.

Rifleman, deep red, splendid in color and form.

Cornet, bright red, with yellow tip. Well named. A very fine, distinct, and blazing variety.

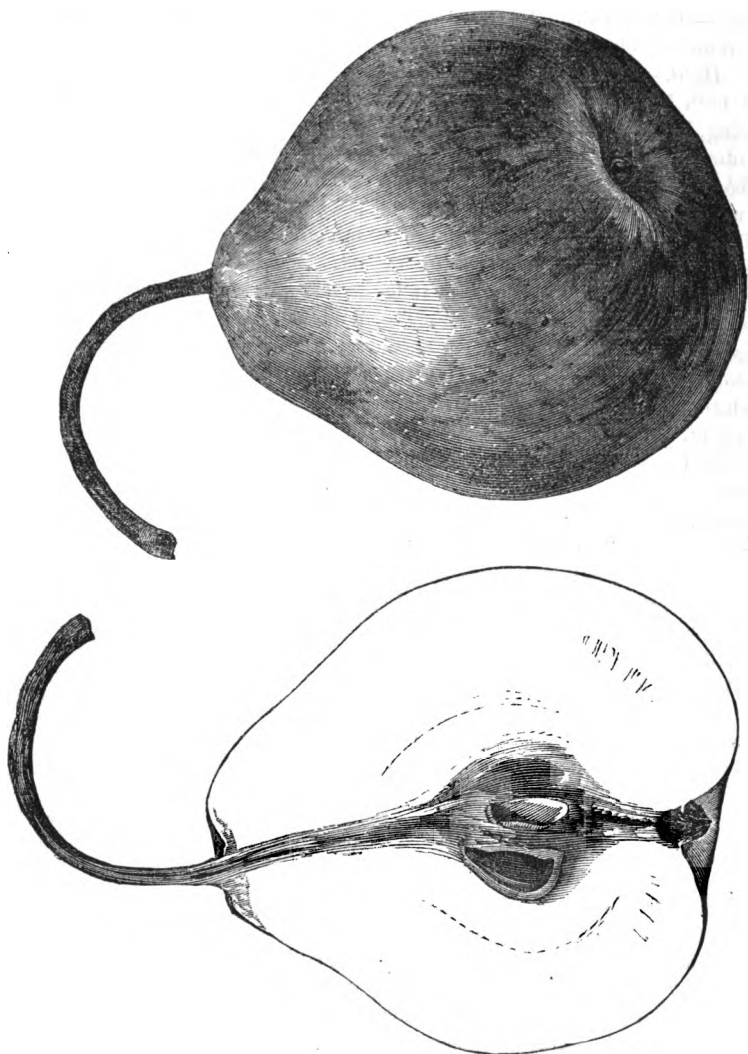
Enough for the present.

[Yes, but not enough for the *future*. The public have a claim upon a man with your knowledge, taste, and descriptive powers. We regret very much that we did not see your *Chrysanthemums*, but it was not possible. Can you not "do up" the new

Dahlias also? Tell us something, too, We can promise you quite as intelligent an audience as you will find at the "National." about your Sweet Williams Phloxes, and other pets. For a change, drop the brush, —Ed.] and paint a few sketches with the pen.

HERICART DE THURY.

BY THE EDITOR.



THE portrait herewith presented was Ellwanger & Barry, of Rochester. The taken from a specimen sent us by Messrs. Hericart de Thury is a winter pear, and

must not be confounded with the Hericart, which ripens in the fall. It is a pear of fair quality, sometimes very good, but is not yet much disseminated. The following is a description:

Fruit, medium, pyramidal. *Skin*, yellow, covered with cinnamon russet. *Calyx*

closed, in a small, uneven basin. *Stalk*, long and curved, inserted in a small depression. *Flesh*, yellowish, somewhat buttery, moderately juicy, with a pleasant flavor. *Quality*, very good for its season, which is from January to March.

HEATING BY HOT WATER.

BY J. FLEMING, JERSEY CITY, N. J.

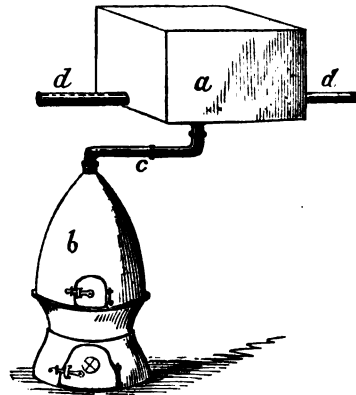
IN the construction of horticultural buildings the heating apparatus is of great importance, and should, consequently, receive its due mead of consideration; for upon it depend, in a great measure, the success and pleasure derived from such structures. What is more provoking on a cold night, with the thermometer falling, than to find your house full of smoke, and that the flue won't draw? But the days of smoke flues are fast drawing to a close, although, in a small house, erected merely to keep over a few bedding plants, a pet Camellia, Azalea, or so, the difference in cost or saving of fuel would scarcely justify the adoption of hot water; and if your house and flue are built on the "Dingwallian" principle, that is, on a rise of about three feet in a hundred, it may be made to answer the purpose very well. But when large houses, or several built in close proximity, are to be heated, then is the economy of hot water apparent. You can then by one boiler heat 1,000 to 1,500 or 2,000 feet of pipe, (the most, I believe, any American firm will warrant their largest boiler to heat, although in Europe boilers are made to heat 20,000 feet,) heating different structures to different temperatures, at a great saving of both labor and fuel; a matter well worthy consideration when coal is selling, as at present, from \$11 to \$12 per ton.

A general impression seems to prevail that hot water is a very complicated affair, requiring a great deal of care and skill to work it, and that you live in constant dread

of waking up some morning to find your apparatus blown up and all your plants frozen. Such alarm is entirely groundless. If properly constructed, any common laborer, with a little judgment, can in five minutes learn to work it as easily as a common flue.

The boiler ought always to be able to heat at least one third more pipe than is attached to it. It is very short-sighted economy to have the boiler too small, as it requires far more attention; and if a very cold spell does come, the probability is you can't get the amount of heat desired. Have also plenty of pipes in the houses; you then do not need to heat the water to such a high temperature.

One thing I would strongly advise, although I very seldom see it done, is to flow the water direct from the boiler into



an expansion tank, and from it distribute to the different houses, as in the figure.

a. The expansion tank. b. Boiler. c. Connecting pipe from boiler to tank. d, d. Flow pipes to the different houses.

You can then heat the water to a higher temperature without the least fear of its overflowing, as is often the case when the expansion tank is at the farthest point from the boiler. When a tank for propagating or bottom heat is in constant use along with the pipes for top heat, this is not necessary.

A better circulation will also be obtained by having one flow and two return pipes, than by two flows and one return.

Also see that you have air pipes from both flow and return pipes at all dips, and at the highest point from the boiler.

It is useless for me to encroach on your valuable space by entering any further into the minutiae of construction, as

there are several enterprising firms, both here and in Philadelphia, who devote their sole attention to the heating of horticultural buildings, and who, I have no doubt, will gladly furnish all required information.

[We are much obliged to Mr. Fleming for calling attention to a subject too much overlooked. The suggestion of placing the expansion tank immediately in connection with the boiler is a good one to prevent overflow. The reader will observe the form given to this expansion tank. The common six-inch circular tank will answer only indifferently well. Something of even more importance than the size of the boiler is the size of the fire-chamber; but this, in most boilers, is not under our control.—Ed.]

THE AZALEA AS A ROOM PLANT.

BY THE EDITOR.

THERE are few plants better adapted to room culture than the *Azalea Indica*. We do not mean by this that it will thrive under neglect, but that, with ordinary good treatment, no plants, not even Cactæ, will bloom better, or yield a larger amount of gratification. This was our experience, after having grown it many years in the parlor. This adaptation arises partly from the nature of the plant, and partly from the time of forming its buds.

The Azalea is not only well adapted to rooms, but, when in bloom, is scarcely surpassed for beauty. A well-grown plant is a complete mass of flowers, a leaf being scarcely perceptible. It is emphatically a gay plant, fairly reveling in its profusion of bloom. There is no collection of room plants so small that it should be without it. We propose to give a few brief directions for its culture.

The Azalea is not easy to propagate in rooms, though it may be done; the proper course, therefore, is to purchase the plants

of the florist. We will suppose the plant to be a small one. As the florist keeps his plants in small pots, your Azalea will probably need potting as soon as purchased. A suitable compost may be prepared of muck, loam, and charcoal dust or sand, in about equal proportions. If muck is not at hand, take some light garden loam, and mix with it a third of charcoal dust. They should be thoroughly incorporated. The Azalea is now to be shifted into a pot one size larger than that in which it is growing. Place a potsherd over the hole in the bottom of the pot, and throw in a few pieces of broken charcoal or small stones for drainage. On the top of this place some compost, and then put in the ball of earth containing the plant. The top of the ball must not be less than half an inch below the rim of the pot, and the quantity of earth placed in the bottom must be regulated accordingly. Having adjusted this point, fill in around the side, from time to time jarring the pot to settle the earth.

When the vacancy is nearly filled, the earth must be pressed down somewhat firmly with the thumbs or with a blunt stick, technically called a potting stick. The potting being finished, the plant should receive a good watering. If the potting has been properly done, the top of the pot will hold just about water enough to go through the ball of earth. It is a common mistake with novices to fill the pot too full of earth, and plants often suffer great damage in consequence, the water going only half through the ball. The lower roots become so dry as to die off, which greatly enfeebles the plant, so that it sometimes drops not only its flower buds, but many of its leaves.

The Azalea may be left out of doors till there is danger of severe frost; the longer the better. A little frost is not likely to injure it; in fact, we have grown Azalea Indica alba in the border as a hardy plant, with no other protection than that afforded by the shrubbery in the border. When the plants are taken in they should be placed in a room having a southern exposure, and set on a table near the window. It is not necessary that the Azalea should be placed very near the window until it has passed out of bloom and begun to make its new growth, when it should have all the light that can be given it. The *lateritia* class form an exception, since they make their new growth either while in bloom or just before it; they must therefore, at this time, be placed in a good light, especially if the temperature of the room be pretty warm and dry. No plant in a room is likely to receive an undue share of the blessed sunlight.

Watering must be carefully attended to. The Azalea should at no time be allowed to get too dry, or its fine, delicate fibers will die off. When in bloom, and while making its new growth, the supply of water should be regular and abundant, without, however, running into the extreme of making the earth a mud puddle. The water should be tepid rather than cold. The Azalea, as well as some other plants, is

often injured by having a stream of cold water poured against its body and main branches.

As soon as the weather will permit, the plants should be removed out of doors, and placed in some sheltered spot, but where they will not receive the drip of trees or shrubs. The plant itself is rather benefited than otherwise by receiving the direct rays of the morning sun, and it may be fully exposed, provided the pot is protected. A good plan is to place the plants in rows, and stand a board against the pots to break off the sun's rays. Moss or straw may also be thrown around the pots, or they may be protected in any way most convenient, so long as it is well done. It is well, also, to cover the ground with a couple of inches of ashes, to prevent earth-worms from entering the hole in the bottom of the pot.

A few words may be added in regard to repotting. The best time for the amateur of room plants to do this is in the fall of the year, just before the Azaleas are taken in doors. The compost already described is to be used. While the Azalea is young it should be potted generously, to increase its size; but large room plants are unmanageable and in the way, and it is therefore not desirable to encourage them to grow too rapidly. Our advice is, to repot a young Azalea annually for the first three years, and after that biennially, always using a pot only one size larger than that in which it is growing.

The winter treatment will be the same as that described above, always taking in the plants as late as possible, and putting them out in the spring as soon as the weather will permit. The Azalea blooms in rooms from January till April, depending much upon the temperature of the room. In a hot room we have seen them in bloom in December, and we have often had a fine show of them on New Year's day.

Insects do not trouble the Azalea much. The red spider will sometimes attack it, but its chief enemies are the scale and

mealy bug. The red spider may be washed off with soap suds. The scale and mealy bug should be picked off. The scale attaches itself principally to the trunk and branches, while the mealy bug seeks concealment in the axils of the leaves. A pin or a sharp-pointed stick will readily dislodge them. The plant must be kept clean and free from insects to insure its health.

In a single article the treatment of the *Azalea* can only be given in somewhat general terms; yet enough has been said to

enable the young amateur (for whom alone this article is intended) to commence a successful course of practice. We have said nothing about growing the *Azalea* as a specimen plant, because few or none are willing, in a room, to give it the time and space necessary to success. Amateurs who have green-houses can thus grow them very cleverly. A descriptive list of some of the best kinds would make the subject more complete; but this must be reserved for another article.

THE PERKINS AND OTHER GRAPES.

BY J. W. MANNING, READING, MASS.

I THINK this grape was sent out from Bridgewater, Mass., nearly ten years ago. I have fruited it two years. It is hardy, but not remarkable for earliness, bears and clusters well; looks well a little before it is ripe; has a sweet good taste if swallowed at once; but it drops from the cluster, which condemns any grape, and is foxy. How it can be said to be "nearly as good as Diana," I can not comprehend. I have one hundred varieties of native grapes on trial; forty varieties bore the past season. I rank the Perkins about the twelfth place among my bearing kinds. It is not desirable while better grapes will grow as well.

Diana has done very well the past season; better than in any season since 1856. Previous to that, it ripened every year, and was frequently in good eating September 1st. It speaks well for any grape to be good two weeks before it is ripe. It is one of the best grapes for winter keeping.

Delaware has not done well with me, but noble specimens have been shown, grown in this vicinity.

Creveling promises to sweep Hartford Prolific from the field. Rogers's Hybrids all propagate readily, grow vigorously, and are healthy. No. 19 ripens before the Concord, and is much preferable as a table grape.

Allen's Hybrid has won a proud rank, and will, doubtless, hold it, if a little winter protection is given it, which it is well worthy of.

Concord is the grape for the million yet; it will long retain a prominent place. I was told by retailers of fruits in Broadway, New York, at the time of the grape show, October 1st, 2d, and 3d, "that at the same price, ten pounds of the Concord could be sold to one Delaware." That is the great point growers of fruit want to come at, "what will sell the best." The taste of the great mass does not yet reject all grapes that look and taste good. The Delaware is a *better* grape. Something else may be *best*. Time will prove them all.

A great change is slowly conquering the common test of "first rate grape." I know men who could extol a grape of the Charter Oak character with a clear conscience ten years ago, who now as freely pronounce all grapes as not fit to eat or cultivate, unless equal to Diana or Delaware. It is expedient to cultivate what will gratify the buyer. Let us test all, allow all to taste, and time will cause a change, that will surprise all who recollect what a poor grape was called "*good*."

[Neither can we comprehend how the

Perkins should be called "nearly as good as the Diana." We think there is a wide gap between the "nearly" and the "good;" though it is natural enough that persons who have been confined mainly to our wild grapes should esteem the Perkins good; and there are others who esteem grapes good if they are simply *sweet*, without regard to spirit or flavor; but in time, and by degrees, they learn that there is a higher excellence than mere sweetness. The Diana is one of our best grapes. Its only drawback is, that on young vines, and in some seasons and localities, it does not ripen uniformly. If noble specimens of the Delaware have been grown in your vicinity, you should strive to equal them. Perhaps some part of your treatment has been faulty. We predicted several years ago that the Hartford Prolific would be superseded, and it is safe to say that its course is nearly run. We now have others as early, and a great deal better, and there is no reason, therefore, why it should continue to be planted, except in collections. It should not be forgotten, however, that it has performed a good work in its day.

We think the Allen will hold its present position, and grow in public favor. It is an excellent grape, and is no doubt hardy enough for a widely extended cultivation. The Concord will be largely grown for a while yet, but not as long as many suppose. The fruit dealer who told you, "that at the same price, ten pounds of the Concord could be sold for one of the Delaware," perpetrated a very broad joke. Now let us try it for a moment. In the first place, the fruit dealers have had no facts to warrant any such conclusion; in the second place, the facts are all against them! The truth is, there were very few Delawares in Broadway for sale, and they sold rapidly at from forty to sixty cents a pound, and in a brief time they were all gone. Concords, at the same time, were selling at twenty cents a pound, and a little later at twenty-five cents. As you say, a great change is going on, and that change is teaching the masses the difference between a grape that is first-rate, and one that is not. To that end we have worked.—Ed.]

WAYSIDE THOUGHTS UPON ARCHITECTURE.—No. II.

BY ARTIFICER.

PAINTING.—In performing the necessary manipulations for house-painting, the priming coats for exterior work should be mixed with clear old white lead and pure linseed oil, in about the proportion of ten pounds of white lead for every *two* quarts of oil. For interior painting, it is best to use with the lead boiled linseed oil exclusively, instead of *raw*, or a proportion of boiled and raw, as is sometimes done, with a small quantity of patent dryer ground in turpentine, which will cause the priming to set quick and form a body without dripping. For exterior second coat work use the priming process, and add thereto sufficient white lead to make the paint quite stiff. If neutral tints are used, then

estimate about two-thirds of the above proportion of lead to be added to one half its bulk of color, and all the oil they will take. This, as a general rule, and for common use, is sufficient. But as there are several degrees of strength, of fineness, and of quality in colors, so there must be many rules, or rather no definite rules at all; only, artist-like, a conception of what is demanded, and a constant working with muller, paint, and brush, until it is answered in the very tone and impression sought. For second coating interior work, grind the white lead in raw linseed oil to the consistency of thick paste; then reduce it with turpentine until in a proper condition to spread with the brush, using, as a general

rule, an equal quantity of oil and turpentine, to complete the mixing process. The second may sometimes be made a finishing coat by the addition of a larger proportion of turpentine, and by straining the color carefully, and adding a portion of the finest French zinc, equal in proportion to half the quantity of lead used, supposing the finish to be a clear dead white. For neutral tints, the addition of the required color in the proper proportions to the white, mixed as above, for a base, is sufficient. I would not, unless in some exceptional cases, advise the use of two coat work for completely finishing the wood work, but wish to be understood as urging the necessity of not stopping short of good *three* coat work, and in some cases four and five coat work.

In preparing the third coat, if designed for a dead white, the ingredients should be first, equal parts of the best old American white lead, and the best quality of French zinc, ground in equal parts of raw linseed oil and turpentine, as stiff as possible, and afterwards reduced with all turpentine to the proper consistency for use.

If it should be required to finish with a superior gloss, (technically termed China gloss,) then the work must receive a coat of white shellac upon the priming, and the last or third coat should be composed of three parts zinc to one of lead, ground in oil and turpentine, and reduced with the latter, and after becoming dry should have, in addition, one coat of the best white varnish, and to perfect the gloss, add still another coat.

An exceedingly beautiful white paint for interior wood work may be obtained by the following process: To one half gallon of turpentine add twenty ounces of frankincense; place it over a fire to dissolve, after which strain and put in cans for use. To one quart of this mixture add three quarts of bleached linseed oil. To these two mixtures combined add equal parts of clear old white lead and the best *French zinc*, ground in turpentine. Strain them; and if too stiff, reduce with turpentine, as for

other interior work. Paint prepared in this manner gives out scarcely any odor, and if well done, will preserve its fine finish many years; but its great cost, compared with the commoner kinds of white paint, prevents its coming into general use.

GRAINING.--If we were disposed, and could always accept the conditions of procuring and preparing the better class of woods for house finishing, it would be better to do so, on account of their real and undisguised worth, and the consideration in which they are held in all true architecture; but in the absence of an abundance of the rarer and finer woods, as walnut, oak, cherry, rosewood, maple, and mahogany, graining in imitation of these has seemed to become, in these days of rapid building, highly proper, and an almost universal vehicle of covering for soft wood finish, and for ornament; and since it is thus thought to be rarely possible, and seldom expedient, to employ woods richly veined, and susceptible of oil and polish, there exists suitable reasons for grained imitations, when we know and accept them as such; the same as we would use gilding in the absence or scarcity of gold, or stucco ornaments instead of and to represent carvings in marble.

Graining may be properly employed in nearly all branches of domestic architecture, but should never intrude in the higher fields of civil and ecclesiastical architecture.

It may be employed upon the wood-work of dining-rooms of a cheerful oak imitation, on walls, saloons, and lobbies, either in oak or walnut. In libraries, in imitation of English walnut, rosewood, or old oak. Bed-chambers and closets should never be painted white, but be grained in imitation of chestnut or pollard oak, whose tones are quiet and subdued, without glare or reflected lights. Kitchen and kitchen offices may be grained in imitation of either oak, maple, or chestnut, provided it be finished in oil, and not varnished; otherwise a flattening of good warm drab or French gray, on two coats of priming, with lead and oil,

will be found both serviceable and easily kept clean.

A good piece of grained work, like any other work, derives its chief excellence from good and proper materials and skillful handling; and to answer fully this last demand, it is required that the artist or grainer study closely the character and grains of the woods to be imitated, and also enter into an analysis of them all. But I desire to afford the reader facilities for judging of, and selecting good materials for graining, (if he does not already know,) and hence shall repeat the process as briefly as possible for some of the best grains in modern use.

Oak.—To prepare a rich ground for oak graining, take old white lead, three parts, burnt terra sienna three parts, stone ochre, two parts, chrome yellow, one; put on two coats, and when dry apply the graining color, composed of raw terra sienna, Vandyke brown, and whiting in about equal portions ground in oil or beer; add about four ounces of gum Arabic, dissolved in a pint of hot water. Mix it well with the other ingredients, and when perfectly dry, varnish with two coats of copal varnish.

Old Oak.—To imitate old oak, make a ground of about equal parts of stone ochre and burnt terra sienna, with one part lead ground in oil. Put on in two coats, and prepare the graining color of either burnt umber or Vandyke brown mixed in oil. Another method, which I think superior to the last for old oak *grain color*, is to grind Vandyke brown and whiting in turpentine, and add a small quantity of common soap to make it stand the comb.

Pollard Oak.—A species of graining used considerably in England, and more mottled than common oak, may be imitated by pre-

paring a ground of chrome yellow three parts, vermilion, one, white lead, three; when mixed the result will be a rich buff. The graining colors are prepared from equal parts of Turkey umber, raw terra sienna, and burnt white vitriol, ground separately in oil to the consistency of paste, and reduced with turpentine, taking care, however, to keep a sufficient quantity of oil in the colors to bind and finish well.

Mahogany Grounds may be prepared in the following manner: To twelve or fourteen ounces of English Venetian red, add three ounces of chrome yellow and one ounce of vermilion, ground in equal portions of oil and turpentine. This ground must be applied to the wood in two coats, upon a priming of lead and oil, quite stiff, stained with a little red lead. The graining color may be prepared with raw and burnt terra sienna, in equal parts, ground in ale. To imitate mahogany more perfectly, there may be a top grain prepared of burnt sienna, and applied after the first grain color has been worked with mottler and softener, and become perfectly dry.

Rosewood may be imitated by preparing for a ground with one part white lead, one part crimson lake, and two parts vermilion, ground in oil and put on in two coats. The graining color is prepared of Vandyke brown, ground in oil quite thin, with a darker after-tint of the same kind of color, to be used with the graining brush, to soften and draw the more delicate veins over the work. When dry, apply two coats of varnish, reduced, if need be, with alcohol, to preserve its gloss.

[To be continued.]

[We have divided "Artificer's" article on painting, in the hope of being able to illustrate that part relating to *neutral tints*. —Ed.]

AMERICAN EVERGREENS.—NO. IV.

BY C. N. BEMENT.

WE cultivate plants with a view to their rarity as well as their beauty. Evergreens,

to the eye of taste, are particularly pleasing in winter; more pleasing when distrib-

uted by the hand of man round his dwelling, than when seen in the forest; not that the cultivated plants are more beautiful, but beautiful and rarer.

Evergreens, in the color of their leaves, vary exceedingly. The unsheltered leaves of the Red Cedar are greatly discolored; and the Hemlock, in open situations, is a pale green. In unchanging verdure and brightness, we have seen no tree that excels the Balsam Fir. These trees, when taken from the mountains, seldom succeed, unless first placed in the nursery. This is true, when set in grass-plats, and left to themselves. In droughts grass lands become comparatively dry, while cultivated soils remain moist. We planted several evergreens from a swamp rather shallow, as most evergreens ought to be planted, and laid round plenty of old hay to keep the roots *moist* and *cool*, and to destroy the grass. With this treatment they will most generally succeed.

Turn we now our attention to another family, the broad-leaved evergreens, and commence with

The Kalmia, or *Laurel*, as it is commonly called in the Northern and Eastern States. It is a North American genus of hardy shrubs, remarkable for the beauty of their flowers. Botanists say there are ten species, all handsome. Nuttall describes five species of *Kalmia* found in the United States. It is found from Canada to Florida. It is found on shady borders of woods, rocky hills, in the deep shady ravines of mountains, and blooms its beautiful flowers in the months of June and July; and being an evergreen, adds materially to the landscape in winter by its dark green leaves, which always give a cheering expression at that dreary season. In most other places, and especially on open grounds, it rarely exceeds three or four feet in height. On open, rocky pastures, it forms a large, close clump on islets, intersected by plots and alleys and grass. In June and July, when every one of these innumerable green islets is crowned with white or rose-colored flowers, and cattle are feeding on the

grass, or laying under the few oaks which are scattered through the pasture, the whole is worth going to see.

Whoever has passed up or down the Hudson River in the months of June or July, that possesses the least taste for the vegetable treasures of creation, could not fail to have noticed and admired this splendid flowering evergreen shrub, growing among the rocks in the Highlands.

The *Kalmia* is rather difficult to cultivate when taken from the woods, but may be increased by layers or seeds. They grow best in peat soil, though they will grow in a sandy loam. They are too beautiful to be overlooked, and should find a place in every lawn and pleasure ground.

The Holly.—A handsome evergreen tree, of slow growth, with a smooth, gray bark, which abounds in mucilage. The flowers are copious, tinged externally with purple, the earlier ones least perfect. The berries are scarlet, casually yellow. The *Holly* grows in hedges and bushy places upon dry hills. Numerous variegated varieties are kept in gardens, and one whose leaves are prickly on the disk.

The American Holly of the United States is a handsome evergreen, which, though in the Middle States a mere shrub, in others assumes the dignity of a tree. Seven or eight additional species are found in the United States, chiefly in the South.

The Evergreen Honeysuckle.—The American evergreen Honeysuckle is the most beautiful and valuable, for it flowers from June till the frost nips its blossoms. It has strong branches, bearing evergreen leaves and fragrant flowers, which are bright red outside and yellow within. All the sorts are produced or propagated by layers or by cuttings. The Honeysuckle loves almost any soil, provided it be not too dry.

The Holly-Leaved Berberry.—This is a fine evergreen shrub. Its habit is spreading, and it attains the height of three or four feet. The foliage is a dark green, glossy, and prickly, like the *Holly*. The

flowers are produced in large heads or clusters, and are a beautiful clean yellow color. They begin to open early in April, and continue throughout all May. A single plant, or a mass of them, in a lawn, produces a fine effect. The color contrasts well with the brilliant scarlet of the Japan Quince—*Pyrus Japonica*—in bloom at the same time. This variety succeeds well in any soil and situation, but, if possible, it should be in a somewhat shaded place, where the sun will not reach it in winter with force. It is so low, however, that it keeps pretty well in the shade. It is easily propagated from seeds and by division of the plant, as it throws up radical shoots freely.

The Privet.—The common Privet, or Prim, as some call it, is a hardy shrub, growing from five to six feet in height in its wild state, tenanted rather moist thickets and hedges, on a gravelly or rocky soil, but it grows well in any situation and in all soils. It may be propagated by seeds, layers, or cuttings. The plants are well suited for making cut-hedges in gardens, especially the evergreen varieties of the common Privet. The branches are straight, and filled with pitch, and the wood is hard. A variety of the Privet may be found growing in a wild state, on the high, rocky, moist lands south of the Sailor's Snug Harbor, Staten Island.

The Yew Tree is a genus of ornamental evergreen trees, well adapted for under-wood, as they thrive under the shade and drip of other trees. They are also very ornamental when planted to form hedges. They will grow in any moist soil, but succeed best in loams and clays. They are chiefly propagated from seeds, which should be sown as soon as ripe; but can also be increased by cuttings formed of either one or two years' wood, and planted in a shady border, in the beginning of April or the end of August. In England the common Yew tree is the only indigenous species. "The trunk is straight, with a smooth, deciduous bark. Leaves,

two-rowed, crowded, linear, flat, and about an inch long, and dark green. Fruit drooping, consisting of a sweet, internally glutinous, scarlet berry. The leaves are foetid and very poisonous, and prove speedily fatal to cattle accidentally tasting them when young and tender. The berries have a sweet, murkish taste, and may be eaten without danger."

We have noticed several fine specimens of the Yew tree growing at Haddonfield, N. J., said to have been imported from England more than one hundred and fifty years ago. They were trimmed or trained into different forms, such as globes, pyramids, &c., one or two looking more like a green hay-stack than any thing we could liken them to. We have also found a dwarf or prostrate variety of the Yew in the vicinity of the Catskill Mountain House. The foliage is a dense mass of dark green. In England it is more generally found in grave-yards than any other tree.

The Water Andromeda is a low evergreen shrub, found on the borders of swamps. Linnaeus has thrown a charm around this delicate shrub in his description of it, published in his *Tour in Lapland*, where he compared its flesh-colored corolla to the beauty of a fine female complexion. It requires protection in winter.

Dwarf Cassandria is another low evergreen shrub, distinguished for its copper-colored leaves and showy vernal flowers. Found more common than the *Andromeda*, and requires the same protection.

The Ink Berry is still another evergreen shrub, of a handsome appearance, with the flowers in the axil of the leaves, succeeded by black berries. It is usually found in wet swamps, but it may be seen on the margin of the *Magnolia Swamp*, in Gloucester, Mass., in a comparatively dry and rocky soil. Under cultivation it is well to give it protection in winter.

The Cow Berry, a very rare woody plant, is found in North Danvers, Mass., and is distinguished for its fine evergreen leaves, its pretty pink flowers, and small red, acid

fruit. It is found in a dry soil, of easy culture, and may prove worthy of cultivation for its fruit, as it can be used like the cranberry, which it much resembles.

[Mr. Bement's copy being imperfect, we close his article here, with the hope that he will complete it in our next.—Ed.]

OF VARIABLENESS IN THE PEAR TREE. (EXPERIMENTS MADE IN THE MUSEUM OF NATURAL HISTORY, FROM 1853 TO 1862, BY M. DECAISNE.)

TRANSLATED BY L. V. DOVILLIERS.

IN 1853 I sowed a large number of pear seeds, chosen the preceding year from well known and distinct varieties, viz.: our old English pear, known to every body, the Bosc pear, shaped like a long gourd, and of a cinnamon color; the Belle Alliance pear, rounded in form, of a red and yellowish color; and the Sanger pear, a wild variety, or nearly so, and thus named because its leaves recall, by their whitish, velvet-like appearance, that of the common sage. For this last sowing, I have used all the crop of a tree which grows isolated from all others.

Only a small number of these trees have begun to bear, otherwise the results might have been still more satisfactory.

Thus, in the variety of the Sanger pear, the only trees that have borne fruit have given four distinct varieties: one ovoid in form, quite green in color; the second less elongated, and almost maliform, partly red, partly green; a third still more rounded; finally, a fourth, regularly pyriform, more than twice as large as the preceding, and entirely yellow.

From *La Belle Alliance* pear have come nine new varieties, none of which resemble the parent fruit, either in size, color, or time of maturity. There are two especially that I will notice, one for its size, more than double that of *La Belle Alliance* pear; the other, by its rounded form, resembles maliform pears.

The Bosc pear gave equally three new fruits different from the type, one of the three being so similar to one of the fruits obtained from the Sanger pear, that it is hardly to be distinguished from it. The va-

rieties are quite as numerous as in those of the English pear, the six trees that have so far given fruit having produced six new forms, as different from each other as from the parent stock. One of them gave winter fruit not unlike the *St. Germain* pear.

A great many horticulturists believed, and Van Mons among them, that the seed of good fruit produced wild trees with sour fruit, thus going back, as it is supposed, to original types. I do not hesitate to affirm to the contrary; and I defy them to cite a single example of a fruit of good quality, fecundated by the pollen of its own flower, whose seed has given birth to a wild tree. Should a good variety, artificially or by insect, be fecundated by a wild one with sour fruit, there will certainly come from these seeds new varieties which will mostly, if not all, be inferior to it. It is equally certain that any good variety of the pear tree, or even of all our fruit trees, self fecundated, will produce good fruit. They will probably differ in some feature or other from the parent variety, but none will take the type of the wild specie.

[This is a most interesting subject, and we thank our correspondent for the translation. The Van Mons theory has now few followers. In raising seedlings from cultivated varieties of fruit, the variations will often be remarkable. The variations are more striking in some kinds of fruit than others. But this is a subject that can not be followed in a note. We shall have some interesting facts to present when speaking of seedling grapes.—Ed.]

GRAPES AT ST. LOUIS.

BY J. M. JORDAN.

MR. EDITOR—I always read with much interest your articles on the cultivation of the *grape*; for that is a subject that interests many here in the West, and as we are yet experimenting with many kinds, I believe we have arrived at the conclusion of a few facts in regard to *some* varieties of grapes. I read with much interest the article in the July number, by "D.," on the *Concord*. Also, the reply in the next number, by our friend from Hermann.

There is no use to try to make the water in the Mississippi run the other way, or to convince the thousands that the Concord grape is not a good one to grow, to sell, to make money, to feed the millions on, in this great valley. Our Eastern friends must know that Western men love the big things—lakes, rivers, valleys, prairies, and *Concord grapes*. I have some twelve hundred vines, four years old, in full bearing, (as you could expect,) after propagating some sixty thousand layers. I don't pretend to be so perfect in my taste as to decide on the merits or demerits of a grape, but I think the best way is to let the masses decide. They have called for grapes, and we have given them Concord; and they have said they were good, very good.

I must say, I believe friend "D." underrated the Concord, as did our friend at Hermann the Delaware. I have a number of hundreds of Delaware doing very finely, and shall plant more this fall. Men's tastes differ; some men say *lager beer* is sweet; but I think it would be hard to convince our children of it, or that the Delaware grape was *not* sweet. Of all the different kinds I have, I prefer the Delaware. It is a good grower on rich, well-drained loam, or sandy soil. In poor clay I would advise grafting it on a native vine, or Clinton. Here the Delaware grows enough; just right for vineyard culture, where we grow to stakes, and

I think in a few years will be largely grown.

I would gladly speak of many other kinds, but have not grown them long enough to prove them, such as *Rogers' Hybrids*; but I shall *never* try to sell any grape that is not worthy of a specific name. This numbering of grapes is very troublesome to the propagator, and should be discountenanced by men in the trade. The Taylor is a very rampant grower, and must be planted on poor soil. It will not bear high cultivation; it is apt to blast. On poor soil it does well by leaving on plenty of wood. Hartford Prolific is doing finely. The Creveling promises well. If desirable, I will keep you posted on some sixty varieties.

Mr. Editor, as you have promised to visit Hermann this fall, I would be pleased to have you call here on your way, and we will be able to show you some grapes, as well as fine pears, and tell you what we are *going* to do.

[We are glad to hear from you. As you say, there is no use in trying to make the Mississippi run the other way. In regard to the merits of grapes, the masses will no doubt decide this matter in the right way in good time. Their tastes are now being educated for the purpose, and we daily see illustrations of it. In regard to D. and Mr. Husman, they both admitted the Delaware to be the best grape. They disagreed, however, as to which each could grow most profitably. The disagreement, we believe, has been amicably settled over a bottle of Delaware wine. We shall be glad to hear from you about the other grapes referred to. We were prevented by illness from making but few visits this fall; but we have arranged to travel west with Mr. Downing next fall, and take all our parishioners by the hand.—Ed.]

MONUMENTS.

BY A PARISH MINISTER.

THE subject of monuments to our departed kindred and friends, is one which I do not remember to have seen in the *HORTICULTURIST*; and yet, it seems to me, it might properly come within the scope of your journal, as a subject which touches our profoundest feelings and most sacred associations. Within the last twenty-five or thirty years, much interest has been manifested in rural cemeteries, and very large expenditures have been made in the neighborhood of many of our cities in establishing and beautifying those sleeping places of the dead. Take, for example, Greenwood, Mount Auburn, and Laurel Hill, the cemeteries of three of our principal cities. They are thickly sown with the sacred dust of the dear departed, who have gone before, and who are silently awaiting the great resurrection. It is meet, certainly, that their resting places should be marked by some monumental stone, some fitting memorial of the affection of the living, and the virtues of the dead. And so they are designated, in many instances, by the costly cenotaph and the richly sculptured marble. In the neighboring cemetery of your own metropolis, almost as much cost has been lavished upon the embellishment of the city of the dead as the city of the living. But in neither of them can much be said in favor of the taste displayed in the bestowment of so much cost.

We are a Christian people, professedly. We commit our kindred's dust to the earth, "looking for the general resurrection in the last day, and the life of the world to come." Our Christian creed comprehends

an uprising through Him who is the Resurrection and the Life. But in most instances there is no recognition of this faith in our cemeteries beyond the solemn words used in the burial of the dead. Our headstones, and monuments, and tombs are not Christian in their form and symbolism. Heathen or classic devices, urns or inverted torches, Egyptian cenotaphs or unmeaning sculpture—under such as these sleeps the dust of those who died "in the comfort of a reasonable, religious, and holy hope," and were buried by Christian hands!

It may be said, indeed, that these forms and symbols are varied and graceful, and do not offend a cultivated taste, while the ruder monuments, in which these old established forms are not found, would be distasteful. But for myself and my dear departed kindred, I would sooner have the roughest cross, cut out of the commonest stone by the rudest handicraft, than the costliest marble designed by classic genius, and sculptured with the purest and most expressive symbols of heathen taste. These things are offensive to a truly cultivated taste, to say nothing of a right religious sentiment.

We have confessed the Christian faith living, shall we deny it when we have passed away to the fruition of its blessedness? Is this the way that the Christian believer, "being dead, yet speaketh?"

We should have Christian monuments in our Christian burial places, and then our graves would preach to us the same doctrines of resurrection and life in which we find our only hope and consolation.

EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

OUR NEW VOLUME.—Like others, we look around, at the beginning of the year, for new fields of usefulness, and to see how the old ones may be improved. We can very plainly see that some interests have been neglected. We have given a large share of attention to the grape, not alone that we seemed to be fitted for it, but because it is a great and absorbing interest, and needed special direction, if not encouragement. But the apples, and pears, and other fruits have now and then uttered an unmistakable grumble of neglect, and the flowers have given forth such plaintive cries of reproach, that at last we are fairly won back to the whole family, and have resolved that hereafter we will not, if possible, neglect a single one of them. We shall keep them all close around us, a happier family than any of the "humans." We shall make no promises, but let the improvements speak for themselves. We hope to retain all our old subscribers, and add a long list of new ones to them. If our old subscribers, in renewing their subscriptions, would send in one or two new names, it would greatly increase our facilities for improving the magazine. There are many who can do this, and we trust that they will.

THE DOUBLE ZINNIA.—The past season has served to give this novelty a prominent and permanent place in the garden. The rule has been fine large double flowers; the exceptions a few semi-double or single ones. The colors are nearly as numerous as in the single kinds, and quite

as bright and as good. The flowers are finely imbricated, with the center well up, and as nearly perfect in form as well can be. We saw at Messrs. Fleming & Davidson's some splendid specimens during the past season. When it was first introduced some disappointment was occasioned in consequence of the flowers not *opening* double; and we know of instances where hundreds were pulled up and thrown away; but fully 90 per cent. of these would have developed their double character if they had been allowed to grow. It should be understood that the flowers become double as they expand. We can heartily commend the Double Zinnia to all who have a garden.

DEATH OF DONALD BEATON.—We have been pained to see, in a recent number of the *Cottage Gardener*, the announcement of the death of Donald Beaton, at the age of 62. He was one of those rare men who belong to their profession at large, and we willingly pay our tribute to his memory. We had learned much of his private worth through Mr. Townsend and others; but we knew him chiefly through his writings in the *Cottage Gardener*; and these, aside from their marked ability, touched a sympathetic cord in our bosom, from the simple fact that many of his articles contained the results of experiments very similar to those which in former years engaged our own attention. Mr. Beaton was a remarkable man, and a writer of great power. Both in the science and practice of his profession he occupied a very distinguished po-

sition. As a writer he was earnest, candid, and manly. His style was spirited, humorous, and vivacious in the extreme. An original thinker, he has left his mark on the age in which he lived. We can well imagine how much he will be missed. But we leave his associates, who knew him so well, to speak of him in the following extract from the *Cottage Gardener*:

"For a considerable time past, since his last illness, Mr. Beaton had been in a universally good state of health, and had become as active and vivacious as he ever was in his best days. He was constantly engaged in attending to his plants and in reading up the latest horticultural information; but on Thursday evening last he was suddenly seized with an attack of paralysis, which entirely deprived him of the use of his left side, and from six o'clock on the morning of Friday till the time of his death he was perfectly insensible.

"There are none who knew Mr. Beaton personally, and few who knew him only by his writings, who will not regret to hear of this event. For upwards of thirty years he was in the van of English horticulture, and for many years the leader of that branch of it which more immediately concerns the flower garden. To Mr. Beaton we are mainly indebted for the direction that has been given to the modern style of English flower gardening, saving that part of it which is distinguished as 'the polychrome style,' and it is generally allowed that through his articles, as published periodically in the pages of this Journal, his fine taste and skill in the harmonizing of colors have exercised an influence which has operated in all the best garden establishments in the country.

"It was not in the practice of gardening alone that Mr. Beaton excelled. Although he has not taken a position among botanists, he was no mean proficient in that science, and there is, perhaps, not another example on record in the history of our British gardening of one who applied that science more skilfully and beneficially to the practice of horticulture. His knowledge of

botany was not of that common order which consists in the running over the names of plants; but whether on questions affecting the alliances, the structure, or the physiology of plants, he was equally acquainted with them all, and he possessed an originality of thought, a keen perception, and a strength of intellect that enabled him to step aside from many of the received opinions, and to promulgate views which some of the most eminent physiologists of the day were not slow to accept. Even as a botanist, however, his name will always be on record, the late Hon. and Rev. Dean Herbert, himself an accomplished botanist, and one who could well appreciate the talents and worth of such a man as Mr. Beaton, having founded the genus *Beatonia* in honor of him.

"As a friend Mr. Beaton was sincere, cordial, and constant; as a neighbor, generous, benevolent, and kind; and as a man, he exemplified, in all his relations in life, the strictest integrity, a scrupulous sense of honor, a forgiving disposition, and a charitable feeling to all with whom he was brought into contact. His playful humor, with which our readers are so familiar, was perhaps the most prominent feature of his character, because it was that which he had the most frequent opportunity of exercising; but no other of the characteristics we have mentioned were less developed, although there were not the same opportunities for exhibiting them.

"The editors of this Journal feel acutely the final loss of their esteemed friend and fellow-laborer. Fourteen years of daily intercourse knitted them and him closely together, and enabled them thoroughly to appreciate his sterling worth, and to know full well the benefits they derived from his aid. In him they had an able coadjutor. And what though at times he was hasty in his assertions? he was always hearty. If he chafed occasionally at opposition, in good time he made amends by proofs of his correctness or acknowledgment of his error; and he never depreciated the merits or undervalued the attainments of those

who were laborers or students with him in the same field.

"To the last he devoted himself to his favorite pursuits; he literally died in the midst of them, for it was when in the act of providing protection for his favorite flowers for the winter that he was seized by the disease which so soon proved fatal."

We learn that a fund is already being raised in England to erect a suitable monument to Mr. Beaton's memory. It has been proposed by Messrs Buchanan, Davidson, and other friends of Mr. Beaton in this country, to contribute something to the fund as a mark of respect to his memory. We think the movement a very proper one, and have consented to receive and forward any sums that may be sent to us for this purpose. We honor talent and downright manly worth wherever found.

THUNBERGIA.—During a visit at Mr. Downing's, we were much pleased with his manner of growing the Thunbergia. The common method is to train it on a frame or strings; but Mr. Downing lets it run in a mass on the ground, which it completely covers. The flowers shoot up above the surface, and look charming, with their pretty buff coats and dark eyes. In this way the Thunbergia might be made an effective bedding plant. We hope some of our readers will try it.

VERBENA MONTANA.—We have received through Mr. Downing a plant of this new Verbena. It came, we think, from Nebraska, and is said to be hardy. It was received as dry as a chip. Not wishing to run any risk in losing it, we potted it, and it is now showing signs of life. Not having seen the flower, we can not describe it. It seems to have a robust habit, and may prove to be an acquisition. We can judge better next season.

FLAVOR OF GRAPES.—We have just seen (Dec. 18) in the *Magazine of Horticulture* some comments on our criticism of the New York Grape Show. It is too late for more than a few brief remarks. Friend

Hovey says the criticism is in "very bad taste," and is "poor advice to offer." As we offered no advice in the premises, we need say nothing on this point. In regard to the bad taste, we take issue. Committees are not infallible, and their acts are open to criticism in common with others. We have at least on two former occasions criticised the action of committees, but its bad taste seems to have been quite overlooked. But, to be brief, we do not know of a single editor of a horticultural magazine, either American or foreign, who has not indulged in this bad taste; and we place you, friend Hovey, pretty nearly at the head of the list. On this subject we are in good company. The truth is, however, there is no bad taste about it; it is simply the discharge of a duty. Mr. Hovey says that he does not consider that *flavor* is *quality*. The man who undertakes to separate them, either philologically or pomologically, will have a herculean task before him. Flavor is quality, and the precise quality that was to rule on the occasion in question, as seems to us very plain; hence our criticism, and for no other reason whatever. We had not the least idea of saying any thing to detract from the real merits of the Adirondac, which we have commended over and over again. Friend Hovey says he never could see much flavor in the Delaware. All we can say is, that we are sorry, for his own sake, that he can not perceive what is really there, for he deprives himself of a source of large enjoyment. Mr. Hovey further says, "The complaint is, that it [the Adirondac] wants character, and the same may be said of the Hamburg." That, it seems to us, is putting it quite as strong as we did. The Hamburg, certainly, is not a *high-flavored* grape, and would not, on this point, take a prize over the Muscat of Alexandria, Chasselas Musque, and others. This is precisely the point embraced in our criticism.

REPORT OF THE COMMISSIONER OF AGRICULTURE.—We have received the Report for 1862, but have not finished its examination.

Correspondence.

EDITOR HORTICULTURIST,—I have been very much annoyed the past three years with caterpillars in my cold vinery. They are from a white moth that lays its eggs on the underside of the leaf. I have tried hand-picking; but enough will always escape to start a new crop. I do not see them on vines in the open air, although I often see what I suppose to be the same kind crawling about. Can you give me a remedy?

Three years ago I wrote to you, asking what it was that was eating my grapes, both in the early and cold house. You could not inform me, but said it was not an insect, as I suggested. It proved to be *mice*, and is easily remedied by the common trap. I mention it for the reason that I have seen no mention of their depredations in the HORTICULTURIST, nor in any of the works on the grape.

They eat only a few from the top of each bunch, but soil the rest, rendering them unfit for use. One word more: I notice that in the works on the grape the Cannon Hall Muscat is mentioned as a late grape, and some works speak of it as difficult to ripen without fire heat. It has fruited with me the past two years, and ripens with the White Frontignan, (I think a day or two earlier,) and, of course, some days before the Black Hamburg. Truly yours, W.

Newark, Wayne Co., N. Y.

[In regard to the caterpillars, you should at the proper season look over the vines, and destroy the *eggs*. This is better than all the mixtures we could recommend. This, and picking off by hand the few that will escape, will soon free you from this pest. We knew, from your description, that it could not be an insect that destroyed your grapes. Mice are sometimes a great pest in the grapery, not only eating the grapes, but destroying the vines themselves. Costar's rat remedy will soon clear them out; and if a new colony comes in, as sometimes happens, they must

be treated in like manner. The Muscat is a difficult grape to grow without fire heat. Under favorable circumstances it will ripen nearly at the same time as the Hamburg. It will hang for a long time. The books are about right.—ED.]

EDITOR HORTICULTURIST,—In answer to your inquiries in the September number of the HORTICULTURIST, in regard to the composition of my soil, aspect, and the variety of Rhododendron planted, I will state that my exposure is north-northeast. The most of my grounds is limestone clay, the sub-soil abounding in limestone pebble; in many places the pebble is intermixed in the soil.

Both of the plants were the Catawbiense variety. One of these I planted on high ground; dug a large hole, and used for compost a mixture of black alluvial soil, where hogs had been fattened one year previous, with a little sand from the river, with some compost.

The other plant was set on lower ground, where it was naturally rich; on ground that had never been cultivated but once, of a tolerably deep, black, loamy nature, where limestone pebbles abound pretty plentifully. I added some light sandy loam from the river. The place was moist, not wet. Both plants were well mulched, and occasionally watered, as needed.

If you can now correct my errors, if I have made any, so that I can grow this superb plant, and explain the reason why, in both cases, the plants made a good growth the first season, and afterwards became sickly the second season, and made but feeble growth, and died outright the third year, you will lay me under lasting obligations.

Very respectfully, E. MANNING.
Harrisburgh, Franklin Co.; O.

[Planting Rhododendrons on ground where hogs had been fattened, would cause the death of probably 90 per cent. of them.

We can see nothing in your exposure, or in your soil naturally, to prevent the Rhododendron from growing well. Select an eastern exposure, protected, if possible, by trees or a fence. Break the soil up very fine, and add leaf mould, if the soil is not naturally rich in vegetable matter, but avoid all kinds of manure. Manure will cut off the fine fibers the moment they reach it. Procure varieties of the Catawbiense that have been grown in pots, if possible; plant them carefully, breaking up the soil around the roots very fine, and we have no doubt you will produce beautiful specimens of the Rhododendron.—Ed.]

I am desirous of cultivating a few plums. I already have several trees, but the crop is uniformly destroyed by the *curculio*. My impression is, that if the plum can be attached to a trellis, I could have it (or the *curculio*) better under my control. Please answer the question in your next issue, and name some good varieties of the plum that will do well in that form of culture, (if any,) and oblige

Yours, &c.,

J. L. R.

Haddonfield, N. J.

[You would have had better success if you had practiced jarring; but you may grow your plums on a trellis, and cover them with netting during the season of the *curculio*. Besides, if you train your trees "en cordon," planting them three feet apart, you will have a source of almost endless amusement. The following are a half dozen of the best for this purpose: Green Gage, Washington, Jefferson, Blue Imperatrice, Imperial Gage, Bleeker's Gage.—Ed.]

EDITOR HORTICULTURIST,—I inclose a leaf from a Delaware grape. It is the first of the kind I have observed, and only to be found on one vine. Of that vine a large number were thus affected. Can you say what it is? I have been for many years a reader of the HORTICULTURIST, and never have been so well pleased as since under your control. The

custom of allowing contributors full sway without comment, permits many an error to obtain, which by a few judicious remarks are shorn of their evil tendencies. Your position, as filled by you, reminds me of the careful cultivator using the pruning knife to push a growth or lop one away, as may be needed for the health of the plant under treatment.

You will hear, ere long, from this part of your horticultural domain, in the way of grapes. Could you visit us on your way out, we think we could show you Catawbas that would almost set aside your favorite Delawares. We claim to have one of the best grape regions to be found in the West, not excepting that of our Missouri friends.

You must not think of a hurried visit when you come, as we all claim an interest in you, though we do not know you personally.

I set out this season a few hundred Delawares, and would like to show you that they will grow.

I can not say what has caused it, for I have used no manure nor subsoiled, and yet I have Delawares that have grown six feet, besides numerous laterals.

I was surprised, but none the less pleased with the growth. I have several other varieties, but my vineyard is yet too young to report upon.

This has been emphatically a fruit season, all kinds having produced abundantly. The very dry weather has caused peaches to ripen before reaching their full size. The serrated peaches all mildew in the leaf, especially in such dry seasons. The white fruits, such as La Grange, Morris White, &c., mildew upon the fruit, causing them as they swell to crack open and become worthless.

Excuse me, I did not intend this. I wanted you to see the leaf, and forgot myself.

Yours,

J. E. STARR.

Eminence, Ill.

[We should have answered your letter before; but as your leaf is the same as Dr. Garber's, in answering him we answered you (partially) and several others. The leaf is

literally covered with excrescences, and in each you will find a small yellow worm. We have seen here and there an excrescence for many years, but never such a multitude as during the past season. They appear chiefly on the ends of the shoots, and must be injurious when they are so numerous. You should cut off the ends of the shoots, and burn them up. We thank you for your appreciation of our manner of editing the magazine. It involves a great deal of labor, but we could not do it otherwise, and be ourself. Our chief aim is to do good, and it is pleasant to be understood and appreciated. When we come to see you, it shall not be in a hurried manner, but we shall take time to see you all, and talk about grapes and all manner of fruits. We are particularly pleased to hear of every instance of success in growing the Delaware at the West. Success is the rule; failure the exception. We shall be pleased to hear from you again.—Ed.]

EDITOR HORTICULTURIST,—As I have a little place near the city, and have undertaken the cultivation of grapes, having two years ago set out over two hundred vines, and not being experienced in grape matters, I rely very much upon your Hints on Grape Culture, to judge whether my man is managing right or not; and, therefore, a loss of a single link in the chain of instructions you are giving in each number, is a loss not to be overlooked. Next spring will be the commencement of the third year for the vines. The exposure is an east by south-east; the soil is a gravelly, clayey loam; by going down three feet the gravel increases in size, and, I think, more mixed with sand. I trenched thirty inches, with bones and manure mixed in, and turned under with the top soil when trenching. The plants are eight feet apart in rows six feet apart. Delaware and Concord are the principal grapes. I have also five or six other varieties, but only for variety. I intend to plant Delaware altogether hereafter, should I find the location, soil, etc., well adapted for it. I have adopted the general system.

Should you see any thing that you think

would be advisable for me to do under the circumstances, to assist in developing this little vineyard, please do so.

Yours truly, J.

Pittsburgh, Oct. 5, 1868.

[We judge, from your letter, that you are doing every thing properly. Your exposure is good, your soil suitable, and its preparation judicious, only you should add some fine muck if you can get it. The distance of eight feet is too much for the Delaware; it is using your ground unprofitably. We therefore advise you to put in another Delaware between them, so as to have them four feet apart, and adopt the double-arm system first described in our "Hints." We shall be glad to advise you at all times.—Ed.]

EDITOR HORTICULTURIST,—I have several lilies on my grounds that I would like to get the true names of while you are among the lilies. The first is a short grower, a foot and a half high, foliage drooping, dark color, flowers upright, orange spotted, from six to twelve on the stalk. Done flowering 12th of July. The next begins to flower about the same time, (the 12th,) grows taller, leaves longer, flowers stand up, and about the same color as the above. I have another lily, flowers white in the fall, just before the frosts in October; pale green foliage, flowers and leaves stand up, over a foot high. By giving the names of the above lilies in the HORTICULTURIST, you will very much oblige a subscriber, B. LOSEE.

Coburg, C. W.

[We can hardly undertake to give the proper names of your lilies from such an imperfect description. Nothing is said of the form of the leaf, flower, etc. You see as the matter now stands, a dozen or more of this tribe start up and say, "I'm his lily!" and we are unable to decide between them. The first mentioned may be *Maculatum*, and the last a *Hermerocallis*. Give us a sketch on paper, if you can, of the leaf and flower.—Ed.]

THE
HORTICULTURIST.

VOL. XIX.....FEBRUARY, 1864.....NO. CCXII.

Hints on Grape Culture.—XXXIV.

IN response to a number of inquiries, we devote the present article to *Roads*. These are a necessary adjunct to a vineyard, and must not be overlooked. They take up room that might otherwise be devoted to vines; but they save so much manual labor that they can not well be dispensed with, unless the vineyard be of very moderate dimensions. Their usefulness and necessity should be apparent when it is taken into consideration that the vineyard must at times be manured, and the crop gathered and removed. The intervals between the roads should be so regulated as to lessen as much as possible all labor necessarily performed by hand. As a general rule, the principal roads should be from forty to fifty feet apart, and run at right angles with the rows, unless a steep hillside should render this impracticable. There should also, except in small vineyards, be one or more roads running parallel with the rows, as an additional convenience for cartage. In vineyards where vines are in rows eight or ten feet apart, the cart is usually driven between the rows; but we consider the practice open to objection.

The reader will get a better idea of the subject from an illustration, for which purpose we have prepared *Fig. 1*, representing a portion of a vineyard. The vines are planted four feet apart in rows six feet from each other. Here every thirteenth vine is omitted, which makes roads *a, a*, eight feet wide, at intervals of forty-eight feet, which is a convenient distance. One row of vines is omitted for the parallel road, *b*, twelve feet wide. A convenient distance for these parallel roads is about one hundred feet. At the time the vineyard is planted, it would be but a little additional trouble to lay out all these roads of a uniform width of eight or ten feet.

Now let us see how these roads are to be used. We will say, for example, that the vineyard is to be manured. The cart is to be driven to the entrance of road *a*, and as much manure thrown off *on each side*, between the two first rows, as will suffice for half a row. The cart is then moved forward, and a heap of manure placed at the entrance of the next two rows; and so on till all the rows have been supplied. If the thing is rightly done, there will be a heap of manure on both sides of the road

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FEBRUARY, 1864.

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at the head of each row. The manure should be thrown in as far as possible, to save labor in the spreading. The cart will pass through all the roads in this manner; after which the manure is to be spread. In doing this, begin at the heap, and scatter the manure as far as possible with the fork. There will be a small space in the

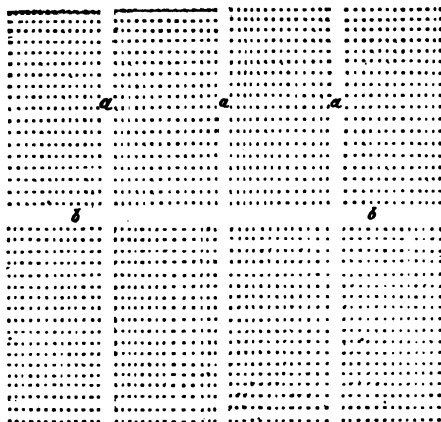


Fig. 1.

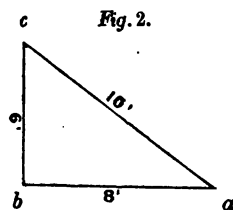
middle not reached in this way, and to this the remaining manure must be carried in a barrow. There will not probably be more than one good barrow load left at each heap, and the labor will consequently be light. If the roads were a little closer together, say about thirty feet, the manure could all be spread from the heaps; but the economy of giving up so much of the vineyard to roads may well be doubted.

Let us now turn our attention to the use of these roads at the time of vintage. The cart enters the road as before, and stops at the head of the first row. The laborers gather the fruit from *half* the rows on each side of the road, and put it in baskets; when these are full, they are carried to the cart, which is moved along as the fruit is gathered. In passing through the next road, the fruit on the other half of the rows is gathered. In taking the fruit from half the rows at a time, much labor is saved in running back and forth; and every step saved in the vineyard is a penny gained.

We have learned, that in laying out vineyards, much trouble is experienced in getting the lines at right angles to each other. The same difficulty is met with in laying

out orchards, gardens, &c. There are several ways of meeting it, two of which are here given. It will be borne in mind, however, that vineyards are sometimes located where right-angled lines are not desirable.

Fig. 2 is an illustration of the most usual mode of laying off a right-angled line or corner. Determine where the first row

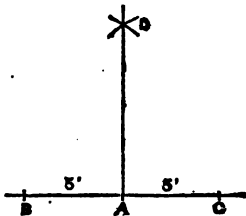


is to run, and spring your line accordingly. Let this line be represented by the line *a, b*. Next spring the line in the direction *b, c*. Measure off 8 feet on *a, b*, and put a pin in the line at that point. In the same way measure off 6 feet on the line *b, c*. The pins will be at *a* and *c*. Now take a string or a pole 10 feet long; place one end at *a*, and move the line *b, c* till the other end of the string or pole meets the pin at *c*. The lines will then be at right angles with each other. If three narrow pieces of board, re-

spectively 6, 8, and 10 feet long, be nailed together, a right-angled triangle will be formed, which will often be found useful on the farm in laying off orchards, vineyards, fences, foundations, &c. When these pieces are put together, the above measurements should be on the outside edge.

Another method, and one which we have generally used for many years, we first saw in Davies's *Practical Mathematics*, a very able and useful work. It is illustrated in Fig. 3, and is of easy and rapid application. Determine the direction of the first row or line, and in springing your line extend it six or eight feet beyond the

Fig. 3.



point at which the angle or corner is to be formed. Let B, C, be this line, and A the corner. At A drive in a small peg or make a little hole. From A measure off 5 feet to C, and put in a peg or pin. Next measure off 5 feet in the opposite direction to B, and put in another peg or pin. Then take a string 10 feet long; place one end at C, and

describe an arc. Change the end of the string to B, and describe another arc. The two arcs will intersect each other at D. Now stretch your line so that it passes directly over A and the point where the arcs intersect each other, which will form the line A, D, at right angles with the line B, C. The points where the arcs are described should be made firm and smooth with the foot. In both the examples the lines should be stretched tight. We have directed 5 feet to be measured off, and a radius of 10 feet to be used; but any equal distances may be measured off on B, C, even two feet, and the arcs formed with any radius greater than this. The measurements given above, however, are found to be very convenient in practice. By one or other of the above methods the reader will experience little difficulty in laying off his rows.

And here, somewhat abruptly and unexpectedly, we terminate these "Hints" as a connected series. We had designed, when we began them, to describe several other methods of training, particularly some adapted to the garden, as well as other interesting details, including wine making, packing, &c.; but circumstances have occurred which have determined us to conclude where we are. The promised book, however, will be given to the public in good time; and this will include every thing the grape grower should know.

HARDY FERNS.

BY WILLIAM J. DAVIDSON, NEW YORK.

In every garden there is some nook where, shaded from the sun's genial rays, few if any favorite flowers can be grown, and which, from that very cause, is often an eyesore the season round. In such a spot Ferns delight to grow, and will there develop their elegant and graceful fronds, and with their varied colors and feathery forms will impart to the hitherto barren spot a charm and a freshness peculiar to themselves.

In the green-house and conservatory also they form a beautiful ground-work and relief to the more brilliantly colored and rich foliage plants, while in the stove house the finer exotic species revel in the heat and moisture necessary for the proper cultivation of tropical plants, adding a richness and variety to the effect which no other class of plants can give.

With your permission, Mr. Editor, I would offer a few remarks on the manage-

ment of *Hardy Ferns*, in the hope of calling attention to a much neglected class of plants, confident that any one who once commences their cultivation will not think his time or space misemployed. The first necessity for their proper cultivation is *shade*; for though some varieties are found in open meadows or on exposed rocks, yet they never approach to that health and luxuriance which they attain in a shady situation. The structure for their growth must be a matter of taste, though probably the best mode of culture is on banks or rock-work composed of rough stones; the larger the better; "burrs" from a brick-kiln, or what, perhaps, looks as well as any, large, rough pieces of coke dipped twice or thrice in thin cement. These form beautiful "rocks," and being so light, might often be used to advantage in the glass Fern case. Old bricks form an excellent basis for a rock-work, serving at the same time for drainage, and from their porosity holding a large quantity of moisture, are the best possible material to which the roots of ferns may attach themselves. It will be obvious to every one who has seen ferns grow, that a light sandy soil is the most natural, and, therefore, the most suitable. A liberal admixture of wood earth or leaf mould is desirable for some of the finer varieties, while for those that require it, as *Cystopteris*, some varieties of *Asplenium*, &c., a small quantity of lime rubbish should be used. The taller and stronger growing varieties may be grown in any good loamy soil, and should be planted principally to the back of the Fernery, so as to allow the finer varieties more light and a little more chance of being seen. Many of the small growing, and some of the drooping kinds, may be planted in crevices of the rocks and stones, and will there soon flourish and make themselves at home. It is necessary, however, in planting, to imitate, as much as possible, their natural habits. Those found in low, damp situations will not flourish on a rock or dry bank, nor will natives of the mountain side grow well in a

marshy situation. Take, for instance, our "*Woodsia ilvensis*," so common in some localities, growing in crevices of the rocks, almost burnt up in summer, and faring still worse in winter. Common sense at once says, a low, damp situation will soon kill it; but choose for it a high and comparatively dry situation, as nearly approaching its native habitat as possible, and you have every chance of success.

In arranging the fernery, the deciduous and evergreen varieties should be so planted, that even in the winter months, when the foliage of the former has died off, the latter may still keep up the interest, and relieve the barrenness and ruggedness of the rocks till the return of spring bids them all unfold new beauties. A liberal supply of water is also a requisite to the well being of ferns; for in our hot summer days, if once allowed to flag, the beauty of the plants is gone for the season. A slight sprinkling overhead, with a fine syringe, in hot weather, will soon tell to their advantage, while the strong growing varieties should have as much at the roots as they can use, especially in the growing season. As regards the most suitable kinds, I would name the following as most easily procured, though many others, especially the cultivated varieties of the British species, are equally desirable, and add fresh beauty and interest to any collection:

Osmunda cinnamomea, *O. spectabilis*, *O. Claytoniana*.—These are all common and very showy varieties, with contracted flower spikes, growing from 2 to 5 feet high, and delight in a moist situation.

Onoclea sensibilis.—Also a common and beautiful fern, about 2 feet high. The fertile spike much contracted.

Aspidium Novboracense.—A beautiful pale green, delicate swamp fern, about 2 to 5 feet high.

Aspidium spinulosum and its varieties are not uncommon, and are all beautiful. 1 to 2 feet high.

A. cristatum.—A noble looking swamp

fern, with conspicuous fruit dots, two feet high.

A. Goldianum, a more rare but stately and showy fern 2 to 4 feet high.

A. marginale, and *A. acrostichoides*.—The fronds of these two species keep green through the winter. Very useful ferns, 1 to 3 feet high.

Cystopteris fragilis, *C. bulbifera*, *Woodsia obtusa*, and *W. ilvensis*, have all beautifully divided fronds about a foot long, and are indispensable.

Dicksonia punctilobula, a very graceful, sweet-scented fern about 3 feet high, found in moist, shady woods.

Athyrium filix-femina.—The graceful "Lady Fern" must have a conspicuous place; a truly beautiful fern, 1 to 3 feet high.

Several varieties of *Asplenium* can also be grown to advantage, and being evergreen, are especially valuable:

Asplenium trichomanes, *A. ebeneum*, *A. rutamuraria*.—All dwarf varieties, from 2 to 12 inches high.

The *Camptosorus rhizophyllus* and *Scolopendrium officinarum*, with its varieties, are also evergreen, and add greatly to the winter beauty of the former.

Our beautiful "Maiden-hair Fern," *Adiantum pedatum*, must also have a prominent situation, as must also *Woodwardia radicans* and *W. Virginica*, both beautiful and graceful ferns.

Polypodium vulgare is also essential, and will thrive in almost any situation.

Nor would I omit the rare *Lygodium palmatum*, or "Climbing fern," the different

varieties of *Botrychium*, *Ophioglossum*, and *Lycopodium*, all to be had for the looking for, each new plant procured giving a fresh interest to and delight in the hardy fernery.

These are all native Ferns, and the greater part of them can be gathered in an hour's ramble in the country.

Of rarer cultivated hardy ferns, I would mention *Aspidium filix-mas cristata*, a most beautiful fern. *Polystichum* (*Aspidium*) *angulare*, *P. depauperatum*, *P. proliferum* *Woolstoni*, *Blechnum spicant*, and a few of the many varieties of *Scolopendrium officinarum*, *Polypodium vulgare*, and *Athyrium filix-femina*.

[We are obliged to you, Mr. Davidson, for having introduced such an interesting subject. Very few know how much pleasure can be derived from a collection of native Ferns. For the ladies, especially, they have peculiar charms. Among the many interesting objects to be seen at Mr. Downing's, there is scarcely any thing more so than his wife's collection of native Ferns; each one, in her case, is an endearing memento. To the ladies we would in an especial manner commend the Ferns, both native and exotic. A large house, devoted entirely to these plants, would be a grand sight, with their diversified forms and graceful habits. Since you have your hand in, Mr. Davidson, we must call upon you to write an article on exotic Ferns for the ladies. You are altogether a ladies' man, and, of course, will be delighted with the task. We should.—Ed.]

A COUNTRY CHAPEL.

BY MEAD & WOODWARD, ARCHITECTS, &C., 37 PARK ROW, NEW YORK.

PLACES of Christian worship, since the days of Constantine the Great, may almost be claimed as types of progress in themselves. By him the early Christians were permitted to build some of their churches on the plan of the ancient Basilicæ, a kind of public hall or court of judicature, construc-

ted with porticoes, a large hall, aisles, and tribunals. This style was followed by the Romanesque and Gothic, stretching over a vast range of discordant detail and fragmentary style; but finally emerging from the gloom of centuries with all the significance of a purified and revolutionized art.

Figures 60 and 61 are designed to illustrate the simpler, purer type of chapel edifice, suited to country worship, such as ought to be in every hamlet or village throughout the land.

Churches are among the best evidences we can possibly have of the growth of a community in religious and moral culture; and ever since the days when Jesus of Nazareth taught among men on the plains

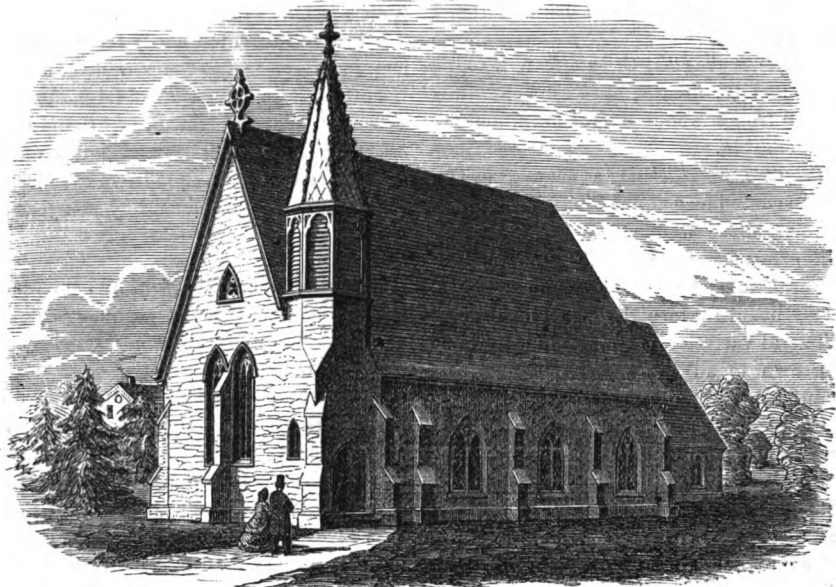


Fig. 60.—Perspective.

of Palestine and the shores of Galilee, the way and the life, and wherever the sweet, sad tones of His promise have thrilled the

wayworn and weary soul deepest, and lingered longest, there have stood places of Christian worship, like so many Bethle-

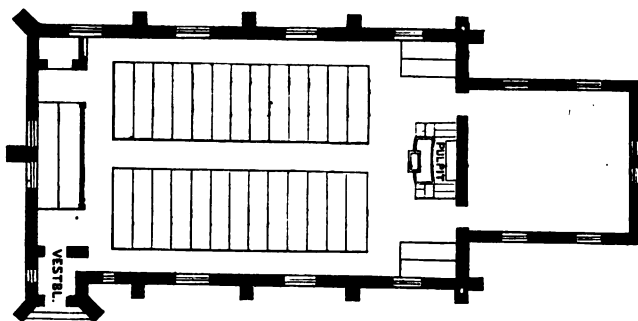


Fig. 61.—Ground Plan.

hem stars over against the incoming generation, pointing out the way to liberty, light, and truth.

It is a mournful thing to witness a thriving village without a church; filled, per-

haps, with beautiful homes, upon whose bosoms have been poured the evidences of lengthened prosperity, and of love for those who dwell there; yet amid all the luxury of tessellated floors and gilded ceil-

ings, not one thought of God who gave, "not one tithe," not an offering to witness the gratitude of grateful hearts toward Him who is our strength and our reward. The cost of this chapel, with an open tim-

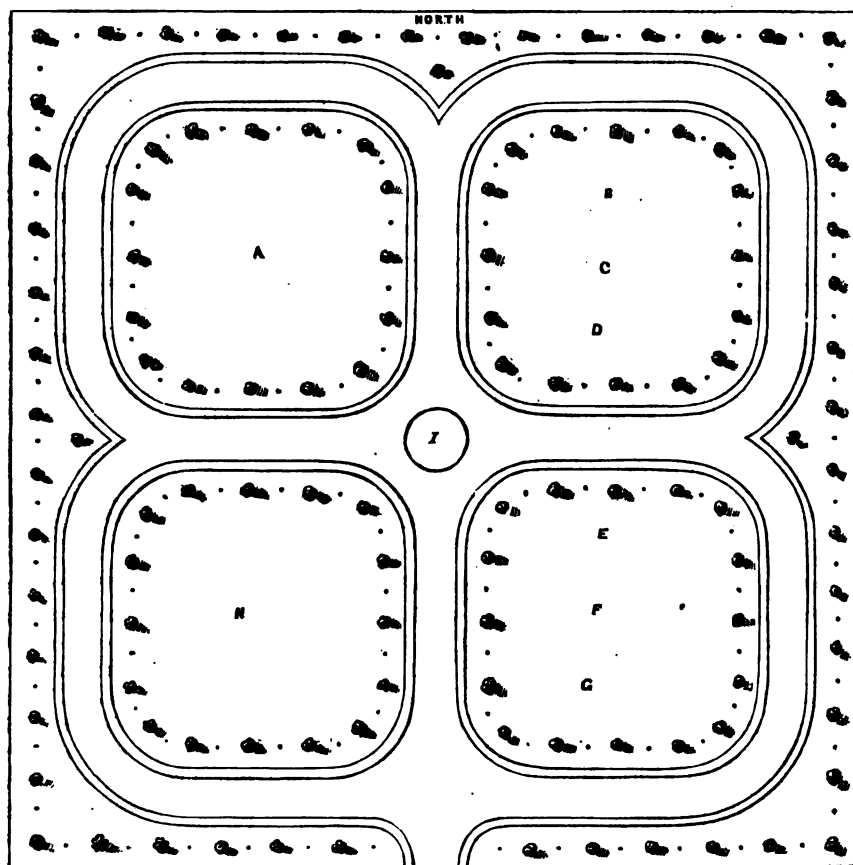
bered roof and style of finish suited to its character, would be from \$7,000 to \$9,000, according to the locality and working facilities at hand.

AN ORNAMENTAL FRUIT AND VEGETABLE GARDEN.

BY THE EDITOR.

It is some time since we have given any thing in the way of a garden sketch. We propose now to make amends for it, and

give a sketch occasionally which may be devoted to some useful purpose. We can conceive of no good reason why the fruit



and kitchen garden should not be made an ornamental as well as useful feature, espe-

cially where the garden must necessarily be in sight; and in grounds of limited ex-

tent concealment is not often possible. This was the case in the present instance, the garden being in sight, not only from the dwelling, but also from the road. It was attempted, therefore, to make it an ornamental feature, and we think not without success.

In forming the beds of a kitchen garden, the sides, for obvious reasons, should be straight lines. If this rule is departed from, the beds should be made to assume such figures as will admit of straight lines within them, as far as possible. In planning the accompanying design, this rule was kept in view. The corners are rounded off, but the rule of straight lines as adhered to just as closely as though the corners had been square; but the effect to the eye has been greatly enhanced. In softening down the corners of the beds, an opportunity was also presented of breaking up the stiffness and formality of the border, which still further increased the effect as a whole. Then, too, room was made in the center for a cistern or a rustic tool house, or both combined. Thus a slight departure from ordinary forms, carefully worked up, converts a spot, usually any thing but attractive, into one that is neat, if not beautiful.

We made the design for Byron Murray, Esq., at whose country seat at Englewood, N. J., it has been laid out. The effect is pleasing and satisfactory, and the plan is much admired. It is located on a piece of ground sloping gently to the south. On the north it is protected by a fence, and on the west by the stable. The exposure to the south and east is open. The surrounding border, ten feet wide, is planted with dwarf Pears, with a Currant bush between. The four beds are fifty feet square, and along the margin, five feet from the walk, are planted dwarf Pears, with Gooseberry bushes between each. The beds may be variously appropriated. At A there are several rows of grape vines. B, C, and D are used for Asparagus, Rhubarb, Seakale, and Strawberries. E, F, G, and H will be used for vegetables, provision having been made elsewhere for Blackberries and Raspberries. The margins of the beds and the border will be used for Lettuce, Radish, Spinach, and other low growing plants. At I will be erected a rustic tool house. The stable yard is near by on the west, convenient for drawing manure, as well as for removing weeds, haulm, and other unsightly objects. We regard it as a neat, compact, and convenient garden.

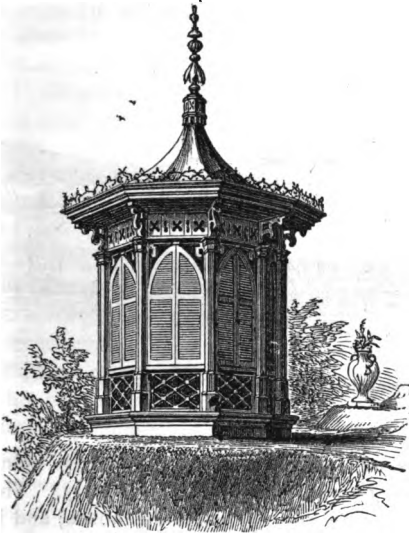
A SUBURBAN SUMMER HOUSE.

BY THE EDITOR.

IN the adornment of ornamental grounds, some considerable attention has been given to summer houses and similar structures; but these have been mainly *rustic* in their design and finish, and in this respect well adapted to their purpose and surroundings. The good taste of these structures will not be called in question. There are locations, however, in the more immediate vicinity of our large cities, where a style less rustic would seem to be more in harmony with the architecture which is found to prevail. We refer to residences on the outskirts of our large cities, with inclosures containing

a few city lots. Here the architecture, so far from being rural, is, on the contrary, stiff, sharp, and sometimes very ornate. A rustic summer house in such a place would be an incongruity. A rustic house is in itself a beautiful object; but there is a certain charm in association which can not be widely departed from without doing violence to our conceptions of the fitness of things; and hence a purely rustic house without rural surroundings is destitute of the chief elements which give rise to the beautiful. Most persons would say it was out of place.

The design herewith presented was prepared to meet the requirements of such a



case; it is consequently somewhat elaborate. It is located on a small plot of ground

within the city limits, and in full view from three streets. The grounds are laid out with a few rectangular walks, and such shrubs as the small size of the place would admit of. The house, we think, corresponds with its surroundings. Its faults, if any, are a little too much ornament, but something of this kind seemed to be required in the absence of that more beautiful ornamentation produced by the drapery of Nature. The house is so located that it receives the morning sun for a few hours, but during the rest of the day is in the shade; it therefore constitutes a pleasant place of retreat for the family at all hours, and is used by the children freely as a play house. The floor is laid in narrow stuff, and is elevated a foot above the ground for the sake of dryness. Easy seats, a handsome center table, and a hanging lamp complete the interior. Venetian blinds afford ample protection on a misty day or a chilly night, or admit the soft summer breeze on a hot and sultry eve.

PLANT HOUSES.—IX.

BY THE EDITOR.

Our next illustration is a hot graperie that we designed several years since for J. Lanyer, Esq. It is forty-one feet long and twenty feet wide. *Fig. 1* is a perspective view. It is covered with a low, continuous, curvilinear roof, and is without side lights. The omission of side lights materially lessens the cost of the house, and secures additional warmth. In some cases, side lights serve no other purpose than architectural effect. Graperies, propagating houses, and plant houses generally may very well be constructed without them; some of these houses, indeed, are very much better without them.

In the present instance, to prevent what is called a "squatty" appearance, and also to give additional headway, the side walls were carried up some twenty inches above the ground line. The house is thus made to assume a handsome appearance. Air is

introduced into the house at the sides, through under-ground wooden air chambers opening on the inside near the walk. Instead of these wooden air chambers, we now use six inch glazed pipes, as being more convenient and durable. It is an effective and excellent mode of introducing

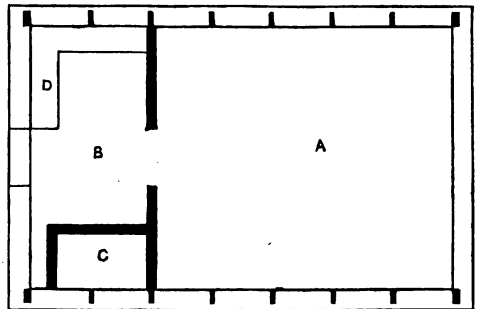


Fig. 62.—Ground Plan.

fresh air, without letting it directly on the

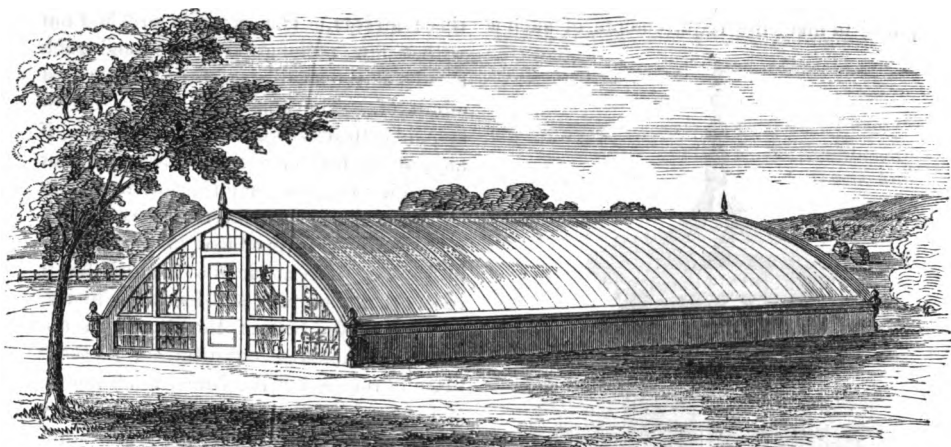


Fig. 1.—Perspective.

plants. Ventilation is effected by the sash over the end doors, and also by ventilators placed along the ridge board.

Fig. 2 is the ground plan. At the north end a small room is partitioned off for a boiler pit. On one side is a chest of drawers for seeds, &c.; and on the other some shelving. In connection with the boiler pit is a coal bin, not, however, of very large capacity. The house is heated

by two four-inch pipes, the design being not to work the house very early. The border is entirely inside the house, and is composed principally of sod, muck, and gravel, with the addition of some old manure and bone shavings. The vines have done well, annually ripening a fine crop of fruit, and the house has in all respects proved to be satisfactory.

GLEANINGS FROM OUR NOTE BOOK.

BY A. G. HANFORD.

In our intercourse with farmers and fruit growers in different parts of the country we pick up many stray bits of information, experience, and observation. For our own and others' benefit and encouragement, we oftentimes record them.

A profitable Grape Vine.—A. Thompson, of Madison Township, has an Isabella grape vine trained over two sides of his dwelling house, from which, in three consecutive seasons, he gathered 1,200 pounds of ripe and merchantable fruit, one season alone yielding 500 pounds. Who owning a square rod of ground would be without a grape vine?

Lawton Blackberry.—Mr. Thompson does

not succeed with the Lawton. We suggested that he grew too many suckers and too much grass among them. His neighbor, C. Limpert, whose land is similar, and only a few rods distant, has had remarkable success with the Lawton. From three rows of ten stools each, thirty hills or stools in all, he gathered, in 1861, ten bushels of fruit, and in three years past twenty-two or twenty-three bushels. His bearing canes are pruned and trained to a wire trellis, sloping about twenty-five degrees, and the ground very thoroughly cultivated.

Delaware Grape.—Mr. Limpert succeeds finely with the Delaware grape. With him

it is a *strong grower*, exceedingly productive. The berry and bunch increase in size as the vines grow older.

Pears every Year.—Within a few feet of the kitchen door is a tree of the old English Jargonelle Pear, its branches spreading over and around the kitchen chimney. Here was discovered the secret of Mr. Limpert's successful competition at the horticultural exhibitions of our county and township fairs.

This tree has been grafted with a number of varieties, a single limb or branch to a sort. When others, with trees less *fortunately* situated, have their fruit cut off by untimely frosts, the proximity to the house, with the smoke and warmth from the chimney, has saved his, and year after year he is enabled to exhibit a dozen or more plates of fine fruit, the product of this one tree.

Pear on Apple—Near by is growing an apple tree, one limb of which was grafted some fifteen years ago with a scion from the Jargonelle Pear, and has borne many fine crops. This year it was bending under the weight of a bushel or more of large, fine fruit. When nearly ripe the branch was broken off by a storm.

How early may trees be moved in Autumn?—We are frequently asked this question. The instance we are about to relate is an extreme one, and will serve to show that, when proper care is used, it may be done much earlier than is generally supposed safe. J. A. Carpenter, nurseryman, of Cobden, Ill., dug some apple trees the latter part of August, 1859, first carefully removing all the foliage. These he had on exhibition at the Illinois State Fair at Freeport in September; also, the week following, at the United States Fair at Chicago. After being out of the ground three weeks they were heeled in, and the following

spring planted in the orchard. *All* lived, and grew as thriftily as others freshly taken up and planted at the same time.

Crab Cider.—Nelson Hoyt, of Worthington, made nine barrels of cider from the produce of seven small Virginia crab trees, for which he received \$72: double the price of cider from common apples.

Plums—The Curculio: What to do with them.—S. Creighton, of Lithopolis, brought plums into the Columbus market the past summer by the wagon load. Says he has tried various methods for preventing the depredations of the Curculio, and has at last settled upon "*the spread sheet and jarring process*" as the most effectual. One year he applied with a syringe, a preparation of lime, soap, &c., with very good success, saving the plums; but the Curculio, driven from its first choice, resorted to his peaches and apples, nearly destroying the crop. By the jarring he is enabled to destroy the curculio, and thus not only save his plums, but his peaches and other fruit.

[Your "gleanings" are so interesting, that we venture to hope your "note book" is of no ordinary size. It is not often that the Pear worked on the Apple does as well as the case you mention. Our correspondent, "Horticola," last spring, worked some Pear scions on the Paradise stock, and they made a fine growth. The union, however, in such cases is not generally very perfect, and the tree requires to be closely watched and protected. It may be presumed that Mr. Carpenter's apple trees lived because they *fair-ed* so well. The fact, however, is interesting. If all would unite upon the "*spread sheet and jarring process*," Plums would become almost as plentiful as Peaches in our markets. It is not as troublesome as most people imagine. —Ed.]

ICE HOUSES.

BY MEAD & WOODWARD, ARCHITECTS, &C., 37 PARK ROW, N. Y.

FROM the hot-house to the ice-house we experience the change of temperature

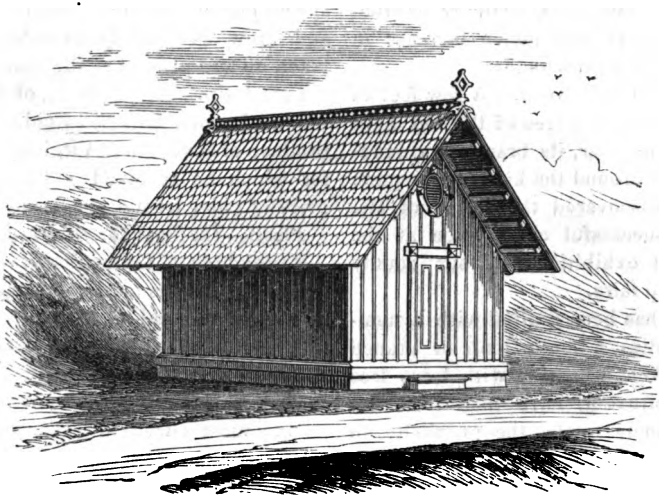


Fig. 62.—Perspective.

necessary to administer to the comforts and luxuries of rural life. It is only within a few years that ice, in all seasons, has been classed among the necessities of life. In large cities it is indispensable, but the cool spring-house or cellar in the country impresses many with the idea that ice, in summer months, can only be regarded as a luxury. Along with other conveniences in keeping with this progressive age, the ice-house has its place, and a country-seat of any pretensions is not complete without it.

It is simple in construction, and can be built very cheaply of rough materials, or made as elaborate as is desirable. It forms a pretty feature about the grounds, if

treated with some architectural taste. The design herewith given, is just in time to get ready for the present season; and

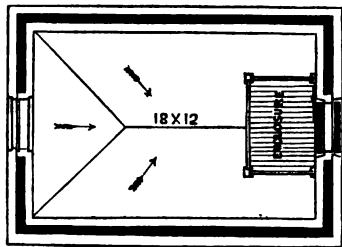


Fig. 63.—Ground Plan.

those who can gather a hint from this, and construct at once, will be glad of it next July.

DOYENNE AND FONDANTE DU COMICE PEARS.

BY THE EDITOR.

It is much to be regretted that such similar names should be given to fruits, more especially where one is good and the other is not. This practice has already produced much confusion in nomenclature, and is in itself an evil which every pomologist should set his face against. Besides, in the pres-

ent instance, the Pears are not so dissimilar, at a casual glance, that one might not, by some, be mistaken for the other, ripening, as they do, at the same time. The short and stout stalk, and very small calyx, of the Doyenné, however, will sufficiently distinguish it from the Fondante without

further examination. To help the reader to distinguish between them, we have prepared portraits of both, taken from samples of fruit sent us by Mr. Downing. We

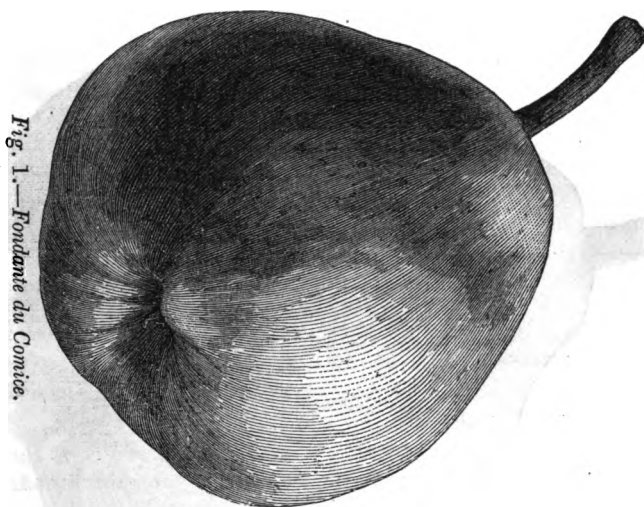


Fig. 1.—*Fondante du Comice.*

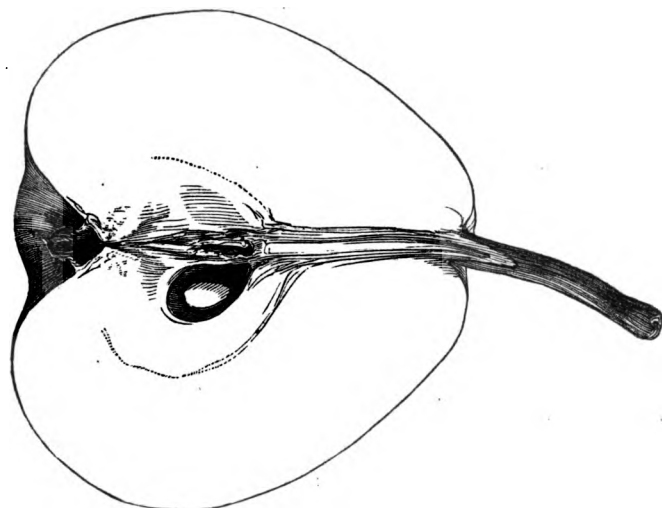


Fig. 2.—*Section.*

had intended to institute some comparisons between them; but it is hardly worth while, for the *Fondante*, as we have hitherto seen it, is so much inferior to the *Doyenne*, that it is really not worth growing; and for this reason, and also because of the similarity of the names, we hope it will be discarded.

By request, Mr. Downing has sent us a description of both. In regard to the

Fondante, Mr. Downing says, "It has not yet been perfect with me, and I can not say any thing positive in regard to its flavor." We fear he will have to wait long before he has a specimen that he can call more than "good;" and of "good" pears we already have more than enough. He adds, "It is not equal to *Doyenne du Comice* by a good deal. The trees are both good growers, but not very vigorous; and bot

seem to thrive pretty well as dwarfs, so far as proved; yet I should think they would not hold their vigor as long as some sorts." The following is Mr. Downing's description:

FONDANTE DU COMICE.—Fruit medium,

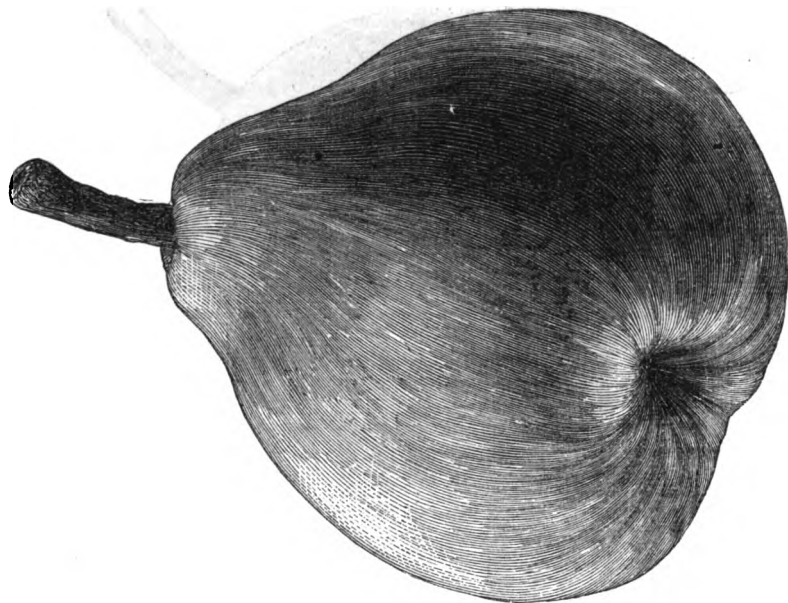


Fig. 3.—*Doyenne du Comice.*

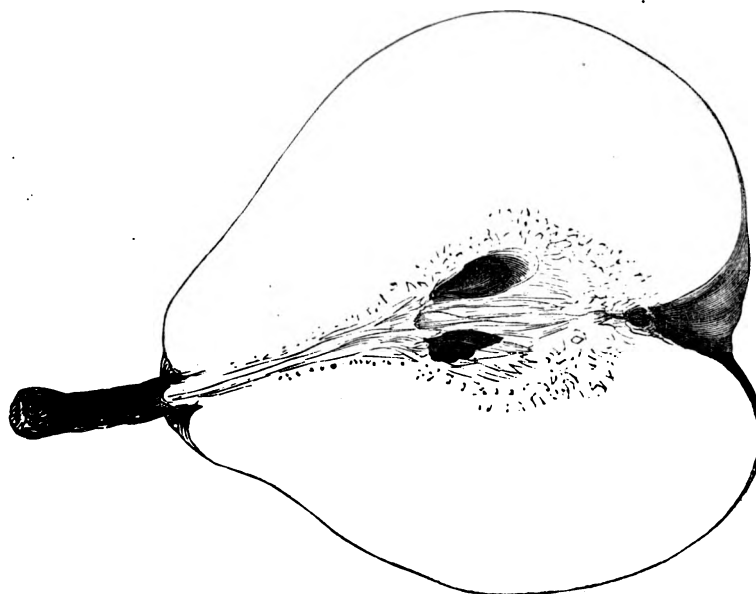


Fig. 4.—Section.

short truncate pyriform, sides unequal, low, rarely with a shade of crimson in the angular, a little inclined. Skin, pale yellow; sometimes slight nettings of russet,

and thickly sprinkled with brown and russet dots. *Stalk*, medium length, small, inclined, slightly curved, inserted in a shallow cavity, sometimes by a lip. *Calyx* open, segments rather short, erect, sometimes slightly curved. *Basin*, large, deep, and uneven. *Flesh*, whitish, juicy, melting, with a pleasant, slightly perfumed flavor, not rich. Ripe in October and November.

DOYENNE DU COMICE.—*Fruit*, rather large, depressed pyriform, somewhat pyramidal, inclined, truncate, slightly angular. *Skin*, greenish yellow, becoming fine yellow at

maturity, often slightly shaded with crimson and fawn in the sun, sometimes with slight nettings and patches of russet, and thickly sprinkled with russet dots. *Stalk*, short and stout, inclined, inserted in a shallow cavity, often russeted. *Calyx* small, open or partially closed, segments small, erect. *Basin*, large, deep, and uneven. *Core*, small. *Flesh*, white, fine, melting, a little buttery, juicy, with a sweet, rich, refreshing flavor, slightly aromatic. *Quality*, "very good," or "best." Ripe in October and November.

WAYSIDE THOUGHTS UPON ARCHITECTURE.—NO. III.

BY ARTIFICER.

Neutral Tints.—And now that enough has been said about graining to enable the reader to form a pretty correct estimate of what materials are good and what should be used, I propose to give some directions for the preparation of *neutral tints*, as well as inquire into some of the leading principles that ought to govern their production, principally for exterior house painting; and here I confess to having attained to the most difficult part of my self-imposed task.

I presume the term "neutral tints" is well enough understood theoretically, though its practical significance be not fully comprehended. In connection with architecture, it does not mean any one of the positive colors, as white, black, red, blue, &c., nor a single compound of some particular and specified *two* positives, producing only and at all times a specified color; but it *does* mean such a use and combination of positive colors as will produce, in harmony and variety, any and all the intermediate tones from white to black.

Those tones are most perfectly neutral that are made to possess the most relative harmony without striking contrast.

When two or more tones are employed on one separate subject, as in the case of parti-colored painting for trimmings and

the body of the building, they should harmonize, with only perceptible difference enough in tone to make them distinguishable.

The harmony of colors may be stated, as a general principle, in the following manner:

1. Red harmonizes with orange or yellow, though positive in tone.
2. Orange harmonizes with drab.
3. Yellow harmonizes with white.
4. Green harmonizes with blue or yellow.
5. Blue harmonizes with white and green.
6. Indigo harmonizes with violet.
7. Brown harmonizes with greens and blacks.
8. Violet harmonizes with pink or purple.

But in the production of neutral tints they may be better exemplified in the following practical methods.

1st. *Cream Color* is produced by using equal parts of *white* and *red lead*, English Venetian red 1 part, chrome yellow 2 parts, ground in oil. *Free Stone* color harmonizes with this, and is produced with red lead as a principal ingredient, English Venetian red one part, lampblack one part, and French yellow two parts, ground in oil and turpentine.

2d. *Drab* is produced with white lead,

French yellow, and lampblack, ground in three parts oil and one of turpentine.

Orange harmonizes with drab, and may be produced of a pleasing tint with French and chrome yellows equal parts, half the quantity of white and red lead, ground in oil.

3d. *Fawn Color*—Reduce raw terra sienna to powder, and use one pound to fifty pounds of white lead ground in oil. A beautiful warm *Drab* to harmonize with this may be prepared with white lead two and a half parts, burnt umber one and a half parts, raw terra sienna half part, and enough of the best English Venetian red to stain the colors and impart a warm hue.

4th. *French Gray* of a superior quality and color may be produced with white lead three parts, Prussian blue one part, vermilion half part, burnt terra sienna quarter part, ground in oil and a small portion of turpentine. Substitute carmine for vermilion in the last coat. *Straw Color* harmonizes with the above, and may be produced with white lead three parts, chrome yellow one part, ground in three parts oil and one of turpentine. *Buff*, also, will harmonize with French gray, it being nearly the same as straw color, and is prepared with white lead four parts, French and chrome yellows two parts each, and one part red lead.

5th. *Pearl Gray* is produced with white lead and equal parts of Prussian blue and lampblack, mixed in oil. *Free Stone* harmonizes with this, and is usually produced with red lead as a principal ingredient, and English Venetian red one part, lampblack one part, and French yellow two parts, ground in oil and turpentine. To lighten the tint a

small quantity of white lead may be used.

6th. Another good *Fawn Color* may be produced with white lead as a base, and equal parts of vermilion or carmine, and stone ochre, ground in oil. *Pearl Gray* does well with this also, prepared as specified in the 5th section.

7th. To prepare a pleasing *Chestnut Color*, mix stone yellow, vermilion, and black, using white lead as a base, ground in oil. *Chocolate Color* harmonizes with this, and may be produced with white lead three parts, common Venetian red two parts, red lead one part, and black one part, ground in boiled linseed oil, to harden the color.

8th. A good *Stone Color* may be produced with white lead as a base, and equal parts of burnt umber and yellow ochre. *Fawn Color*, as specified in section 6th, does well with this.

I have now extended my hints upon the subjects of house painting far enough, I trust, to make the attentive reader quite familiar with some of its best materials, and the best methods for employing them; and where the proportions have been given, they may be taken for as safe and proper rules as can probably be ever attained to, in a branch of art whose governing law is taste rather than rule.

[We had supposed that we might be able to illustrate this article on "Neutral Tints;" but it was found that the colors would in time fade so much as to mislead. The details are so minutely given, however, that the reader will have little difficulty in producing the tints for himself. —Ed.]

HOT BEDS.

BY THE EDITOR.

As the season is approaching for the use of hot-beds, a few words about the best mode of making them will not be out of

place. We have no idea of saying any thing new, but hope to say something that may be useful to beginners.

A hot-bed should be located in a spot that is well sheltered on the north and west, and open to the south and east. If shelter is not already provided by a fence, wall, shrubbery, or something of the kind, a cheap temporary fence may be erected of rough boards, straw mats, or in some other way that the reader's ingenuity may suggest. This shelter or protection is needed chiefly to prevent an undue radiation of heat from the glass, and the entrance of a strong, cold current of air when the sashes are lifted for ventilation. This radiation is not only hurtful to the plants by causing sudden and extreme changes of temperature, but, if allowed to proceed too far, will cause the heat of the bed to "run out." Let the shelter, therefore, be as thorough as possible. Six feet would be none too high for the fence; but three feet would be much better than none.

The location should not only be well sheltered, but it should be dry. If the material of the bed becomes unduly wet, fermentation will cease, and with it the heat. Manure will no more ferment when it is too wet than when it is too dry.

Hot-beds are sometimes made on the surface, and sometimes in pits. We shall describe the formation of both, though we give a decided preference to those made in pits. But first of all let us get ready the frame, which should be made of well seasoned pine, from an inch to an inch and a half thick. Six feet we have found to be a convenient width from top to bottom. The length must be determined by the reader's wants; we would not advise less than two sashes in length, even for a very small place. The height at the back may be from 18 to 20 inches; the front three inches less. (See Fig. 1, in which a de-

the dimensions.) If boards are scarce, the back may be 12 inches high, and the front 9. If the frame is of any considerable length, it should be strengthened by cross bars, three inches by one. It is quite usual to make the frame of rough boards; but it is neater, and in the end cheaper, to plane and tongue them, and give them two or three coats of stone paint. The inside should be white, but the outside may be of any color that suits the taste.

The sashes will be about three feet and a half wide; the exact width will be determined by the size of the glass. The largest glass that we use is eight by ten. The sash frame should be made of stuff not less than one and a half inches thick. The sides of the frame may be an inch and a half or two inches wide, the top piece two inches wide, and the bottom piece two and a half or three inches. The glass should be bedded in aquaria cement, and the laps should not exceed an eighth of an inch. Some sort of cover will be needed. Straw mats are the best and cheapest that can be got conveniently. In frames that are started very early, for forcing cucumbers, &c., some additional covering will be needed, especially on very cold nights; and this will be afforded by boards, or by doors made on purpose.

Having prepared the frame, let us now turn our attention to the materials for forming the bed. For this purpose we can use manure, or leaves, or manure and leaves combined. Manure alone gives the strongest heat, leaves the most durable. Where a moderate but long-continued heat is desirable, leaves alone should be used. For general purposes, it is an excellent plan to add from a third to a half of leaves to the manure. Oak leaves alone have been recommended for this purpose; but you need not trouble yourself on this point, but go into the woods and gather any leaves you can find: we have found them all good.

If the bed is to be made entirely of leaves, proceed as follows: Put down

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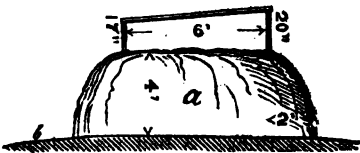


Fig. 1.

notes the manure heap. The figures give
FEBRUARY, 1864.

a layer about a foot thick, and beat or trample the leaves firmly together. If they are dry, they must be moistened, but not soddened. Put on layer after layer in the same way, and be sure to pack the leaves together, otherwise fermentation will hardly take place. The heap should, if possible, be made under a shed; otherwise it should be covered with boards or straw mats. In about a week the heap should be turned, the leaves being well packed together, as before. In three or four days more the bed may be made.

Mark out on the spot selected a space two feet wider and longer than the frame. On this place the leaves in layers, beating them well together with the fork. Continue in this way till the bed is about four feet thick, finishing the top off evenly. Then put on the frame and sashes. The straw mats must be put on every afternoon just before the sun goes down; and this must be continued until there is no longer any danger from frost. That part of the bed of leaves on the outside of the frame must be covered with coarse litter, hay, or straw. The litter should lay well up against the frame.

In the course of a day or two the heat will begin to rise, and when this takes place is the time to put in the mould. This may be any light garden mould, but it must not be wet or muddy. The heap of mould should be prepared beforehand; a good plan being to lay it aside under cover in the fall. Put in from six to eight inches of mould, spread it evenly, and avoid any unnecessary exposure of the frame. When done, close up the frame tight. In a couple of days the soil will be nicely warmed through. It will be necessary, when the sun is out bright, to open the upper end of the sash a little to let off the surplus heat; but less ventilation is needed with leaves than with manure.

It is usual to sow the seed as soon as the soil is properly warmed; but in that case you get a very annoying crop of weeds. If not belated, we generally refrain from sowing the seed for a few days, during

which time all the weed seed within an inch or so of the surface come up. We then take a sharp trowel or pushing hoe, and run it half an inch beneath the surface, cutting off all the weeds. In doing this, you should be careful to disturb the soil beneath as little as possible; for if you turn up a fresh surface, you will only insure another crop of weeds. If carefully done, comparatively few weeds will come up, and much time and labor will thus be saved.

Let us next give our attention to a bed above ground, formed of manure and leaves, the latter constituting from a third to a half of the heap. The manure should be recent or green, long and short mixed together, excluding, however, every thing like corn stalks. Put down a layer of leaves and another of manure, beating it moderately firm with the fork. Continue this till the heap is completed, as directed for the first heap. The leaves should be a little moist, but this is not so important as in the first case, since the leaves will get moistened by the manure. If the heap is not formed under cover, it should be protected by boards. In a few days the heap will begin to ferment. At the end of a week it should be turned; and in doing this the leaves should be thoroughly mixed with the manure. Fermentation will now begin almost immediately. This should be allowed to go on for two or three days, when the heap should be turned again. By turning the heap two or three times, the heat is rendered more uniform and lasting. We have made tolerably good beds by laying the manure in a heap for a week, and then putting it directly in the beds, mixing it well at the time of doing so; but the heat has been unequal. The first plan is much the best.

The manure heap being ready, mark off the bed as before, and then spread the manure in layers about a foot thick, beating each layer moderately firm with the back of the fork. The bed should be about three feet thick. A bed made later may be thinner. As soon as the bed is formed the frame and sashes should be put on. We

may as well say that a lazy man should not be set to make an early hot-bed. Put some coarse litter around the frame on the outside, so that it comes well up to the top. In this condition let the bed remain for a few days. The heat will not be so strong in such a bed as in one made entirely of manure; but it will be stronger than in that made of leaves, and will consequently need a little more ventilation until the heat becomes moderate and regular. If steam accumulates, it must be let off by raising the sash a little higher at the top; but care must be taken to let the sash down before the temperature has been too much reduced. At night the bed must be covered up snugly. At the end of two or three days the mould may be put in, as directed for the first bed. If the bed has settled unequally, it must be made even.

When the bed is made entirely of manure, the heap is prepared in the manner last described. The whole process of making the bed, indeed, is just the same. The heat, however, is usually more violent at first, and ventilation needs to be looked after carefully for a few days to prevent fire-fanging. Attention must be given chiefly to letting off the hot steam. If the heat is too great, it may be lessened by making holes in the bed with a hoe handle or a stick. When the violence of the heat has subsided, the mould may be put in as before directed. Persons who are used to making hot-beds often put in the mould as soon as the bed is formed; but, on the whole, it is better for the novice not to do so.

We shall next describe the method of making hot-beds in pits. We have already expressed a preference for these. The bed is easier to make, requires less material, retains its heat longer, and, on the whole, is less troublesome to attend to. The location should be a dry one. The pit may be a simple excavation; but it will be better, in many places, to make it a permanent fixture, and build the walls of brick. This may be done in two ways. First, build a wall three feet deep, the top being flush

with the ground line, or an inch or two above it. On this set a frame fifteen inches high at the back and twelve inches in front, as shown in *Fig. 2*. The other end

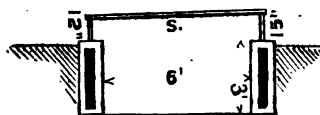


Fig. 2.

better way is to continue the wall a foot above ground, and let the sashes rest on the top of it. To prevent the sashes from sagging, it will be necessary to put cross bars in the pit. The walls will be all the better for being built hollow.

These pits may be heated with manure, or leaves, or both combined, and their preparation will be that already described. When filling in, make the manure somewhat firm with the back of the fork, but do not pack it hard by trampling on it. If leaves alone are used, a little more pains must be taken to make them firm. The directions already given for the mould apply here, and it is therefore unnecessary to repeat them. From six inches to a foot should be left between the surface of the mould and the glass. A permanent pit, will be found a very useful adjunct to any place. Besides affording convenient means, for forcing, it will often be found useful for storage, and half-hardy plants might very well be kept in a part of it during the winter.

Fig. 3 shows a very convenient prop for holding up the sashes, by the use of

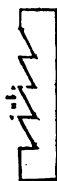


Fig. 3.

which, either at the sides or top, the sash may be raised one or more inches, as required. It is one of the best contrivances that we have used.

"FIRE ON THE HEARTH."

BY GEO. E. WOODWARD, ARCHITECT, &c., 37 PARK ROW, N. Y.

AN open fire is one of those cheerful, delightful accessories of a home that has not been improved on in these days of hot water, steam, and hot air furnaces; nor is it likely that it will be soon superseded by any contrivance affording a more genial heat or better and more effectual means of ventilating. No advance has yet been made in any mode of heating that has equal advantages, in point of health, as the open fire. We have economized in fuel, in labor, in dirt, and dust, &c., but in pure heated air, and well ventilated, heated apartments, there is still a wide field for improvement. While some extensive means of heating seem necessary in large houses, that shall be at all times safe and reliable, it is desirable in that room which is used the most, there should be the life-giving, genial, and exhilarating air and influence of an open fire—bright blazing wood, if possible, or flaming cannel coal.

"If wood costs high," says one writer, "I insist still that it ought to be burned. Chiefest of luxuries is an open fire-place, and a wood fire." . . . "An open wood fire is eminently healthy, and good health is cheap at any price." . . . "The good sense of mankind appears to very great disadvantage when it leads to profligate expenditure in almost every other department, and a suicidal parsimony here."

"The days of wood fire are not utterly gone," says Ike Marvel, in that charming book, "My Farm of Edgewood;" "as long as I live, they never will be gone. Coal, indeed, may have its uses in the furnace, which takes off the sharp edge of winter from the whole interior of the house, and keeps up a night and day struggle with Boreas for the mastery. Coal may belong in the kitchens of winter; I do not say nay to this; but I do say that a country home without some one open chimney, around which in time of winter twilight, when snows are beating against

the panes, the family may gather, and watch the fire flashing, and crackling, and flaming, and waving, until the girls clap their hands, and the boys shout, in a kind of exultant thankfulness, is not worthy the name."

Says a late writer in the *Atlantic*, "I quite agree with one celebrated American author, who holds that an open fire-place is an altar of patriotism. Would our Revolutionary fathers have gone barefooted and bleeding over snows to defend air-tight stoves and furnace registers? I trow not."

There is among the female portion of almost every household a decided objection to an open fire; and dirt, dust, and trouble form its basis, and perhaps the fact that it is old-fashioned has something to do with it; but in these progressive days we find the remedy for this, and can still enjoy the luxury. We allude to the Patent Parlor Fire-place, or low down grate of Messrs. Andrew & Dixon, of No. 1324 Chestnut Street, Philadelphia, an invention which perfects the open fire-place, and adapts it for use in the most elegantly furnished apartment. The principles of this are a fire flat on the hearth, "warming the feet delightfully," and radiating the heat from a concave cast iron backing or lining. The ashes, sweepings, and dust descend through a flue to the cellar, and are removed but once a year. Oxygen is supplied from below through a cold air box, and the heat is "simply pure air warmed" by passing through a hot bed of coals, and without a draft from doors and windows to promote combustion. Thus a coal fire gives out the "soft, delicious heat of an old-fashioned wood fire." We, however, prefer the blazing, crackling wood, as, living in the country, we reckon its cost at a low figure; and our practical experience with this grate or fire-place shows its complete adaptation to either wood or coal,

and as a coal grate, more economical and effectual, more cleanly and beautiful than any that we have used or examined. Dr. Hall, of *Hall's Journal of Health*, one of the most readable journals of the day, says: "No one who has a wise regard for the comfort, cheerfulness, and health of a

family of children, should be without one for a single day." It is certainly a very great advance upon the usual modes of burning wood or coal, and one worthy of the attention of all who have any desire to enjoy the luxury of an open fire.

Mortimer Place, N. J., Jan. 8, 1863.

GLEANINGS FROM MY OWN EXPERIENCE AND THAT OF OTHERS.

BY HORTICOLA.

I. CUTTINGS OF GRAPE VINES.

It is impossible for me, situated as I am, to procure either spent tan or saw-dust, or even sand, to cover the manure in my hot-beds. I resorted, therefore, to coal dust, (anthracite, hard coal,) which serves a good purpose. It is not only clean, but it absorbs the rays of the sun, and remains warm for a long time, as it does not lose its heat by radiation, on account of its color.

Last spring, I noticed a young grape vine growing in the coal dust, by the side of a pot, containing single eyes of a grape which I intended to propagate, and found, on examination, that one of the eyes, planted in sand, had been washed out, and had struck roots in greater profusion and in much less time than those in the pot. Just at that time I received a number of grape vines from Germany, which had commenced growing in the box, and looked very bad. I cut them back very severely, planted them in pots, and succeeded in saving every one of them. All the wood I had cut off, I planted in the coal dust. My hope, however, was very faint; for the young shoots which had grown were from three to four inches long, and perfectly white. I did not rub them off, but planted the old wood with those shoots on. The coal dust I had mixed with a little sand, such as is found by the road sides. To my great surprise, and contrary to my expectation, *every one of those cuttings grew*, so that I did not lose a single one of them.

II.—TREATMENT OF GRAPE VINE CUTTINGS, ACCORDING TO DUBREUIL.

Mr. Dubreuil is so skillful a cultivator, and a man of so much scientific knowledge, that he is deservedly considered an authority of the first class by all pomologists and grape vine growers in Europe, as well as in this country. He is, besides, an elegant, pleasing writer. He has published this year a book on the culture of the grape vine in vineyards, or rather on the improvement of vineyards, (*Culture perfectionnée et moins coûteuse du vignoble*. Paris, 1863,) in which he gives some good advice, especially valuable for France and Germany, in recommending to substitute the plow for the spade; but in that respect there is nothing new for America. It was natural for him, under the circumstances, to ruminate his former teachings; nor do we find fault with him that his book does not contain much that is new.

Perusing the book leisurely, we met, on pages 30 and 31, with the following method of preparing cuttings, which strikes us as very practical and useful. We make extracts from the original, but translate them.

After having said that the cuttings must be taken from the old vines from the fall of the leaf to February, our author continues:

"All cuttings must be made of the same length, say about 16 inches. They must be tied together in small bundles, which must be buried in the following manner: One or more little trenches are opened, about 14 inches wide, and of a depth equal

to the length of the cuttings. The bundles of the cuttings are placed in the trenches in a vertical position, but the *tops downward*. They are then covered with the soil, and a little mound is made on them. When the cuttings are about to be planted, (in March or April,) the lower end of each will have formed a callus of the cellular tissue clearly visible, by which is gained a year over cuttings made in the common way.

"To accomplish the same in another way, the cuttings must, at the moment of planting, be deprived of their epidermis (the brown outer bark) for the space of about four inches from their lower ends upwards, so as to lay bare the green inner bark, (liber.) This is easily and rapidly done, the epidermis having been softened by water or the moisture of the soil in which they were buried. If two thirds of such cuttings grow as have not been deprived of their epidermis, at least ninety-four or ninety-five grow out of every hundred planted with the epidermis removed."

III.—INSECTS.

1. THE CURCULIO OR PLUM WEEVIL.—This is, no doubt, one of the most formidable enemies that infests our gardens, and prevents the cultivation of plums, nectarines, and apricots, almost entirely. Notwithstanding the general experience, I planted eighteen kinds of apricots, all the kinds of prunes known, and some nectarines; but I was determined to be watchful, and to try whether I might be lucky enough to discover some means to keep the curculio in check. When some of my prunes were in blossom, Dr. Grant happened to pay me a visit. He cautioned me against the curculio; but, as my courage was equal to the danger, I did not heed it much. This was on a Friday. The next Sunday morning I looked over my trees, and found, to my utter astonishment, that every one of the little prunes already formed had been stung by a single curculio, whom I discovered and killed. The following year, some of my apricot

trees showed fruit, *one of which had been stung*. I cut the egg out with a penknife, and saved the others by painting them over with lime dissolved in water of the consistency of common whitewash. This operation I repeated several times, until the apricots had reached a little more than half their size. Every one of them ripened; they were of a most delicious flavor. Last year I used a common syringe instead of a brush, which had the same effect.

Prunes, however, and nectarines are too smooth; the lime water does not adhere to them. To accomplish my object, I added some dissolved glue to the lime water, and had the pleasure of protecting my prunes and nectarines successfully. Several years ago I syringed my Brown Kale first with a thin solution of soap in water, and then with tobacco water. This operation had the effect of making the tobacco water adhere to the leaves of the Kale, on which the tobacco water collects in drops, just as if they had been greased over. The soap water removed that difficulty. Lime water does not seem to injure either the fruit or the leaves of the trees.

A gentleman from Pennsylvania told me, a few days ago, that large sheets of paper, coated with tar, and placed under the plum or prune trees, kept the curculio off. He assured me that such was the fact; it was corroborated by the experience of many years. He ascribed the results of the tarred paper to the instinct of the curculio to avoid trees so protected, as they must prove a certain destruction to the larvæ; a view held by many also in regard to water under the trees. Still I differ from it. At all events, I will try the tar.

2. THE STRIPED BUG, (*Galeruca vittata*.)—This beetle had so much increased in my garden, although I killed hundreds and thousands of them, that I concluded to give up planting melons and cucumbers. Before I did so, I laid last spring a coat of coal tar on pieces of shingles and pickets, which I stuck around the hills in which I had planted melons and cucumbers. No

striped bugs troubled me any longer. Unfortunately, there is the borer, which stings the vines just above ground, so that vines six or eight feet long commence at once to flag and die, and in a short time often all plants perish which had promised a large yield. Should the remedy communicated to me by the distinguished editor of the *HORTICULTURIST* be efficacious, it will be of the greatest benefit to the horticultural world.

3. THE ASPARAGUS BEETLE, (*Crioceris (Lema) asparagi* and *duodecim punctata*).—Both are equally destructive to asparagus plants; but only the first of the two has been introduced from Europe, so far as I am aware. The beetle made its appearance for the first time on Long Island. A fortnight after I had seen this mentioned in the horticultural journals, I found that pest on my asparagus, although I live on the west bank of the Hudson, and at a considerable distance from Long Island.

The full-grown beetle is not less injurious than the larva. Both devour the leaves of the asparagus plant, and weaken it so that it often perishes.

It is absolutely necessary to go over the asparagus beds once a day, and to destroy the beetles and larvæ persistently. I immerse the shoots in a basin full of a solution of brown soap and tobacco water, and brush the beetles and their larvæ off.

Mr. H. Jæger, in the second volume of his "Practical Vegetable Gardener," (Leipzig, Spamer,) recommends tobacco dust; and as the beetles dislike rain and shade, the use of water sprinkled on them, and to shade the plants with the branches of evergreens.

It is of vital importance to commence the war immediately, when they make their appearance, *before* they lay their eggs. They are found in May and June, and again in autumn.

4. ANTS.—How troublesome several species of them are, is so well known that I need not say a single word about it. Much less known is a sovereign remedy, which has never failed to expel them from the

house, the garden, or the hot-bed. I read it a number of years ago somewhere, and being fond of trying experiments, I made use of it, and found it infallible in every instance. This remedy consists in GROUND COFFEE. It is only necessary to sprinkle some of it on the ant hills or on those places where the insects are frequently seen, and within fifteen minutes not one of them will be found there. Last summer they had made a large hill very near one of my fences. Before I expelled them I called together a number of boys and girls coming from a school, to show them the effect of coffee on the ants. The children were not a little amazed to witness the precipitate flight of the ants from their hill, which I had sprinkled with coffee. A few minutes after the sprinkling not a single one could be found, to the great astonishment of the children.

The remedy is so simple and so easy of application, under all circumstances, that I wish to call the attention of the reader to it. I have it, therefore, printed so large. During a series of years I have had so many occasions to avail myself of it, that I can speak with the greatest confidence. I repeat, it *NEVER fails*.

[Our readers will all welcome again your practiced pen. You were unconsciously making good plants in your coal dust, from which the reader can gather a hint; and he will remember that it was coal *dust*, and not coal *ashes*. In regard to the method from Dubreuil, much is gained in point of time where the cuttings are already callused when planted. Eyes may be treated in a similar manner, with considerable gain. We do not think your friend's tar remedy will stick. When you try it, try also jarring on other trees. The so-called water remedy has proved to be a fallacy. We leave you to report the efficacy of that remedy; but we can anticipate what it will be. We believe we were the first to call public attention to the Asparagus beetle. We think we first saw it in 1854. Last fall we heard for the first time that it was

in New Jersey. We have seen so much of the ravages of this pest, that we make an earnest appeal for its destruction before it spreads over the country. The surest way is to brush the beetles into a pan of water. In half an hour we have killed thousands in that way. Killing is the only remedy that should be thought of. Thousands

will bless you, *Horticola*, for the ant remedy. But we were almost afraid to publish it, lest the price of coffee, now almost fabulously high, should go up still higher. It must be real *Java*, and not roasted wheat, rye, or beans. Bipeds may be deceived with such things, but we doubt whether the ants will.—Ed.]

THE AZALEA—ITS PROPAGATION IN ROOMS.

BY THE EDITOR.

WE stated in the last article that the *Azalea* was not easy to propagate in rooms, and that it was better to purchase young plants from the florist. This we can only repeat. Still, some of our readers want to "try it," as they say. We admire that kind of courage which is equal to an emergency, and accordingly give the information asked for. The directions will be somewhat different from those we should give to a person who possessed a greenhouse, or even a hot-bed.

It is desirable to have a shallow pot or box. Such a pot may be bought at some of our principal seed stores. We used to have them made with a rim on the outside for holding a little water. A shallow box, a foot square, may be made of stuff three inches wide, making two or three holes in the bottom for drainage. A suitable compost for striking the cuttings in may be made of sharp sand of any kind and charcoal dust, mixed in equal proportions. In rooms we used to have the best success with *Azalea* cuttings, taken just as they were beginning to turn brown; it will be proper to take them as soon as the leaves on the new shoots are well developed. It must be understood, however, that, with proper appliances, cuttings may be taken at almost any time, though young wood is found to strike better than old.

First fill the pot or box with compost. Then take cuttings of the new shoots, as above described, from an inch and a half to two inches long. Cut them square off immediately under a leaf, and remove the

leaves from the lower part for the space of about half an inch. Now with a sharpened stick make little holes in the compost about two inches apart, and half an inch deep, into which insert the cuttings, and press the soil firmly around them. When they are all in, water them with *warm* water, and set the pot or box where it will have a pretty good light, but no sun. It should not be set under the shade of other plants. A good place is a north or west window. The cuttings, however, should be covered with a bell or hand-glass. A good substitute may be made of white paper oiled. If the pot must be placed at a south or east window, a piece of paper should be thrown over the glass when the sun shines. The glass should be lifted occasionally, especially if much moisture accumulates on the inside; for unless fresh air is thus admitted, mould is apt to appear, and the plants will damp off. The soil should not be allowed to get dry; and when watered, the water should be *quite* warm. Cuttings strike best when kept warm at the bottom and cool at the top; and the nearer this condition is attained in a room, the greater will be the success. It will not help the rooting process in the least to take the cuttings out every day, or even two or three times a day, to see whether they have rooted; on the contrary, it will be very apt to defeat this interesting process altogether. We mention this, because we have often seen cuttings thus treated, under the impression that no harm was being done.

At the end of a month some of the cuttings will probably have taken root. To ascertain this, take hold of them gently, and see if they will come out. If you find the least resistance, you may conclude that they have rooted. This may also be known by their making a new growth. When it is ascertained that they are well rooted, they should be put in small pots. They must be removed from the cutting-pot very carefully. Take in the right hand a stick in shape like a book-folder; run it down the side of the pot and under the cuttings, and gently lift them up, when the soil will break and fall away. While this is being done, the cuttings, one by one, should be taken hold of by the left hand, and carefully taken out, with as much of the soil as will adhere to the roots. Have prepared the compost mentioned in our last. Put a potsherd over the hole in the bottom, and fill the pot a little more than half full of soil. Take the cutting between the thumb and forefinger of the left hand, and hold it in the middle of the pot, with the roots resting on the soil, and being well spread out;

then with the right hand fill up the pot gradually. When it is full, knock the bottom of the pot on the table to settle the soil in and around the roots; then with the thumbs press the soil somewhat firmly around the edge of the pot, and, if necessary, add more soil. When finished, there should, in a small pot, be nearly half an inch of space between the surface of the soil and the top of the pot, in order that it may hold water enough to go entirely through the ball of earth. In putting earth in the pot in the first instance, moreover, the quantity should be so regulated that the plant, when potted, will be but little or no deeper in the soil than it was in the cutting-pot. The plants should be watered as soon as they are potted; after which the treatment will be that given in our last article.

We have been somewhat minute in our directions, with the hope that they may be useful to beginners. In another article will be given a descriptive list of some of the best varieties of the Azalea.

NEW OR RARE PLANTS, &c.

WE propose hereafter to keep our readers somewhat posted in regard to the appearance of new plants, &c., as well abroad as at home. The following list we copy from the London *Journal of Horticulture*, and other sources.

DIPTERACANTHUS AFFINIS, (Splendid *Dipteracanthus*).—*Nat. ord.*, *Acanthaceæ*. *Linn.*, *Didynamia Angiospermia*. One of the most beautiful of *Acanthaceous* plants. Native of Brazil. Introduced by Messrs. Henderson, Wellington Road Nursery. Flowers scarlet, blooming in July.—(*Botanical Magazine*, t. 5414.)

ERIA MYRISTICÆFORMIS, (Nutmeg *Eria*).—*Nat. ord.*, *Orchidaceæ*. *Linn.*, *Gynandria Monandria*. Pretty and fragrant. Native of Moulmein. Introduced by Messrs. Low & Co., Clapton Nursery. Flowers white, blooming in September.—(*Ibid.*, t. 5415.)

HELICONIA BREVISPATHA, (Short-spathed *Heliconia*).—*Nat. ord.*, *Musaceæ*. *Linn.*, *Pentandria Monogynia*. Probably a native of South America. Flowers yellow and scarlet, opening in a warm stove during the summer.—(*Ibid.*, t. 5416.)

LIGULARIA HODGSONI, (Mr. Hodgson's *Ligularia*).—*Nat. ord.*, *Compositæ*. *Linn.*, *Syngenesia superflua*. Native of North Japan. Believed to be hardy. Flowers bright yellow, blooming during July in a cool frame.—(*Ibid.*, t. 5417.)

ADENIUM OBEUM, (Thick-stemmed *Adenium*).—*Nat. ord.*, *Apocynææ*. *Linn.*, *Pentandria Monogynia*. Native of Aden. Flowers light pink, with dark pink margin. Requires a hot, dry climate.—(*Ibid.*, t. 5418.)

BURLINGTONIA DECORA var. *PICTA*, (Painted Neat *Burlingtonia*).—*Nat. ord.*, *Orchidaceæ*. *Linn.*, *Gynandria Monandria*. Native

of Brazil. Flowers white, mottled with pink and purple. Blooms in October.—(*Ibid.*, t. 5419.)

GASTRONEMA SANGUINEUM.—Cape of Good Hope bulb. Flowers scarlet.—(*Floral Magazine.*, pl. 174.)

CLEMATIS REGINÆ.—Cross between *C. azurea* and *C. lanuginosa*. Flowers purplish-blue.—(*Ibid.*, pl. 175.)

PIOTEE, Colonel Clark, rosy scarlet, edged white, very clear, no bar. *CARNATION*, Lord Clifton, a pink and purple bizarre.—(*Ibid.*, pl. 176.)

CLEMATIS FORTUNEI.—Introduced from Japan by Mr. Fortune, and flowered by Mr. Standish, Royal Nursery, Ascot. Flowers white, very large, double, and fragrant.—(*Florist and Pomologist*, ii., 169.)

Of foliaged plants, we notice *Coleus atropurpureus nigricans*, described as entirely different from *C. Verschaffeltii*, the foliage being flat, smooth, and of thick substance, and of nearly black metallic luster. It will probably prove to be an acquisition among ornamental leaved plants.

Among Verbenas, the *White Lady* seems to stand pre-eminent, and is said to be the best white ever raised. It is said to be a clear, pure white, and to carry "nearly double the quantity of bloom" of Mrs. Holford. It is said, moreover, to have a "delightful jessamine fragrance."

Mimulus maculosus, a cross between *M. cupreus* and "Gaiety." It has the dwarf habit of *cupreus*, while the flowers are some two inches in diameter, and "very richly marked." It is said to be a "charming acquisition."

Mimulus tigrisoides, "another hybrid of *M. cupreus* with varieties of *M. quinquevulnerus maximus*, partaking of the good qualities of both. The magnificence, diversity, and large profusion of the flowers, as beautifully marked as a *Calceolaria*, with its fine dwarf habit, will make it a general favorite." The *Mimulus* should be grown in a shady border.

Lobelia Paxtoniana, a seedling from *speciosa*. The flowers are described as larger than *speciosa*, with a pure white

center, shading off to a blue margin. The habit is even more compact than *speciosa*.

Ligularia Kämpferii argentea marginata. If this does not prove to be a good plant, it will not be because it has not names enough. It is described in E. G. Henderson's Catalogue as "a highly ornamental evergreen herbaceous plant, from nine to twelve inches in height, with sub-erect, rounded, kidney-shaped, firm, leathery leaves," "richly margined and barred with pure creamy white." It will, no doubt, prove to be a fine plant for greenhouse and border decoration. It is called hardy, but that remains to be proved with us.

Lonicera Schmitziana, introduced by Mr. Roezl from Mexico, and said to be "the finest of all the scarlet-flowering climbing species yet introduced." This will, no doubt, be an acquisition to our list of Honeysuckles.

Lonicera brachypoda aurea reticulata.—This is the most beautiful of our climbing Honeysuckles, notwithstanding the length of its name. It was introduced by Mr. Fortune, and sent out here last spring. The leaves are beautifully netted with golden yellow veins, and look like an *Anæctochilus*. We are greatly pleased with it. It will be a general favorite.

Fuchsia "Pumila", described as a beautiful little variety, well adapted for beds and margins, and said to be "an exquisite little bush even without its bloom," which, however, is very profuse, of a rich, glossy crimson.

Gazanias.—Of these we have *G. aurantiaca*, bright yellow, with black ring in center; spotted white. *G. grandiflora*, larger flowers than *splendens*, with brighter color and more distinct center. *G. Soucii*, light yellow, with jet black central ring, blotched white.

Of *Pears* we notice two, the *British Queen* and *Prince of Wales*, both spoken highly of, and the first said to be one of the best ever raised. They are both English seedlings.

We also notice a new *Grape*, the *Child*

of *Hale*, described in the *Journal of Horticulture* as having an enormous bunch, stout, woody stalk, with a profusion of large, round, amber-colored berries on very short and stout berry stalks. Skin thin, flesh firm and crackling, of consistency of Muscat of Alexandria, but without the flavor. Juicy and sweet, considerable amount of richness, but, unfortunately, the skin astringent.

Of home productions, we notice that Messrs. Wilder & Co. send out *Clapp's Favorite Pear*. We have not had an opportunity of testing the fruit, and can say nothing on this point of our personal knowledge. We have seen a specimen, however. It closely resembles the Bartlett, and is said to be even finer.

Messrs. Dreer and others send out the *Philadelphia Raspberry* and *French's Seedling Strawberry*. We have not seen either.

Messrs. Dailedouze, Zeller, & Co. send out their seedling monthly Carnation *Beauty of Brooklyn*. The form is good, and the colors pure and distinct, the ground color being white. It is a profuse

bloomer. Some time since we made a portrait of this fine Carnation, but lost it.

Mr. Peter Henderson sends out a monthly Carnation, named *Astoria*, raised by M. Donadi. This belongs to the Picotee class. It is described as a flower of large size, (nearly three inches in diameter,) clear canary yellow, the edges regularly marked with pencilings of scarlet, crimson, and white.

Lychnis grandiflora, a hardy herbaceous plant, raised by Mr. Robert Veitch, of New Haven, from seed sent from Japan. Mr. Henderson, who sends it out, says, "It has been a most attractive plant with me during the past summer, having flowered without intermission from June till October. Flowers produced on stalks about nine inches high, of a peculiar shade of orange scarlet, two inches in diameter."

Most, if not all, of these plants, we suppose, may be bought this spring of our enterprising florists and seedsmen. We shall give an additional list next month.

MONTHLY CALENDAR.

We propose to add hereafter a briefly monthly calendar, which we hope may prove useful to some of our readers, though we confess that we do not attach as much value to such things as some others do. We add it as an experiment. If it should prove acceptable to our readers, we will take pains to elaborate it to some extent, and make it as useful as may be.

Orchard and Fruit Garden.—At this season there will be but little to do, unless some things have been neglected which might have been done before. The orchard and fruit garden should be looked over for the destruction of insects, especially nests of the canker worm. Trees should be scraped, and freed from moss and loose bark, which harbor insects. Grape vines may be pruned, and towards the middle or end of the month general

pruning of fruits may be practiced. Scions for grafting may still be cut. Hardy vines may be propagated from eyes towards the end of the month, using bottom heat.

The Grapery.—The *Cold Grapery* will need looking after occasionally, to see that every thing is in order. If there are appearances of mice, use some of the phosphoric remedies to destroy them. The *Hot Grapery* will require constant attention. Keep the temperature as uniform as may be, and increase the heat as may be desired. In houses just started, the vines should not be tied up till the buds have broken. Be careful not to let currents of cold air blow on the vines. Syringe in the morning, and not at night. Keep the floor of the house damp in bright weather. There will be little need of ventilation now, except at the top or ends. Out-

side borders should be well protected. In very early houses thinning out should be attended to, the bunches as well as the berries. Beginners are apt to leave too many of both.

Green-House.—At this season of the year ventilation is an important matter. It should be so regulated as to avoid a sudden change of temperature; and care should be taken not to allow a current of cold air to blow directly on any plant while growing. See that no plant flags for want of water. The novice, in watering, will be careful not to wet his *Camellia* blooms. *Verbenas*, *Petunias*, and other bedding plants may now be propagated for spring use. The house generally should be looked over, dead leaves removed, the surface of the earth stirred up, and every thing made clean and tidy. Such plants as need it should be repotted, more especially those in small pots that it is desired to push forward. To grow stocky and shapely, plants should have plenty of room. *Hyacinths*, *Tulips*, and *Narcissus* that have passed out of bloom may be put in a pit out of doors. Look over *Caladiums*, *Begonias*, and other dormant plants. If some are wanted early, they may now be repotted.

Plants in Rooms.—The wants of these should be attended to daily. Never water till the soil becomes a little dry on the top, and then give enough to go entirely through the pot. The plants will be greatly benefited by being watered "overhead" daily. This may be done by a small broom wisp. Give air on all pleasant days, and change the position of the plants from time to time, in order that all may get a due share

of sunshine and light. Remove dead leaves, stir up the soil occasionally, and keep the foliage as free from dust as possible.

Pleasure Grounds.—It is to be supposed that every thing has been put in order here for the well-being of the plants. It is well, however, to go through the garden occasionally, and repair any damage that may have been done by heavy winds and snow. Where the branches of evergreens, particularly *Arbor Vitæ* and *Junipers*, are bent down by the snow, it should be removed. If lawns were not top dressed in the fall, it may be done now. Towards the end of the month hardy shrubs that need it may be pruned. Roses should be left later. This is a good time to replace labels that have become obscure. Repair inclosures, roads, &c., and anticipate as much as possible the work of spring.

Vegetable Garden.—Not much can be done here either. Bean poles and Pea brush may be cut and stacked. Collect manure and leaves for late hot-beds. Beds that are already at work should be well watched at this season, and ventilated as required. Be careful to retain an equal temperature in cucumber frames, neither too high nor too low. Pinch out the leaders when a foot or so long. Sow in frames early Cucumbers, Melons, Egg Plants, Peppers, Radishes, Lettuce, Tomatoes, Cauliflowers, Cabbage, &c. For general crop the end of the month or first week in March will be time enough; the plants will be better than if sowed earlier. Collect all kinds of rubbish, and get things in order generally for spring work. Make out lists of seeds, and purchase them in good season.

EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

"THOU SHALT NOT STEAL."—As this commandment seems in some quarters to have become obsolete, or, perhaps, was never known, we print it for the benefit of those interested. All right-thinking men have come to regard literary theft as among the most despicable of mean things. To appropriate another's labors without acknowledgment at once places a man without the pale of good society. We have a case in point, having lately received a pamphlet entitled, "Our Hardy Grapes: What to Plant," &c., "made up" without one word of acknowledgment. Our opinion of it is told in a few pointed words. It is the most impudent and shameless piece of plagiarism that has ever come to our knowledge. With good material before him, the person who did the "clipping" was not sufficiently master of the subject to produce a work worth the paper on which it is printed. It is a humiliating reflection, that persons can be found to sacrifice all sense of shame and decency for the sake of a few pennies.

REVISED PRICES.—We desire to call the attention of our readers to the revised prices of our back volumes, which now answer many inquiries that have been made since the price list published in the December and January numbers. We can furnish but few odd volumes back of 1860. From 1860 to the present time our sets are not numerous. They commence with the editorial management of Mr. Mead, and comprise all the connected articles on Grape Culture, Landscape Gardening,

Rural Architecture, &c., and form an encyclopædia of Horticulture, and the useful and ornamental pursuits of rural life, not obtainable in any other form. The ten dollar set from 1860, comprising four bound volumes and a subscription for 1864 and 1865, will form a valuable and attractive addition to any private library in the country. It is fully illustrated with many hundred engravings, and contains upwards of 3,000 pages of reading matter.

Parties making up clubs can include the unbound volumes for any former or future year; thus, two persons may pay each two years in advance, making four copies for six dollars, or eight copies or volumes may be taken in a similar manner for ten dollars. If the volumes are bound in cloth, 75 cents each, and in half morocco, \$1 each additional.

Those having incomplete sets can probably perfect them by immediate application. Those subscribers who have already paid for 1864 can avail themselves of the above proposition, by remitting the amount necessary above that which they have paid.

THE ILLUSTRATED ANNUAL REGISTER FOR 1864.—This welcome annual comes to hand filled with its accustomed interesting matter, relating to a great variety of subjects useful to the farmer and the horticulturist. Mr. Thomas has performed his task in a very acceptable manner. We commend the Register to all interested in rural affairs. It is published by Messrs. Tucker & Son, Albany. Price, 25 cents.

RAND'S FLOWERS FOR THE PARLOR AND GARDEN.—Having previously announced this work, we propose now to look at it a little in detail. The first chapter is devoted to the Green-house and Conservatory, beginning with some good advice in regard to building a green-house; and the reader is particularly advised to "avoid 'cheap buildings.'" After describing the mode of building a house with brick foundation, three feet side lights, &c., the author says, "Now a house of this description can be built for about ten dollars per running foot." In this estimate is included "the glazing, of good serviceable glass, as well as hinges, ropes, and pulleys," and the heating apparatus too, we suppose, as this is a necessary part of a green-house. Now we wish to say, that whatever may be the cost in Boston, this house can not be built for any such sum in New York. If our Boston friends can do it, they can get themselves into a thriving business by coming to this city. We should not find it easy to do it with unplanned boards. We notice this point at some length, because we think such statements are only calculated to retard the building of green-houses by the disappointment that follows. We sincerely wish that the best of green-houses could be built for such a sum. The same remarks will apply to other of the author's estimates. The remainder of the chapter is mostly devoted to stocking green-houses, in which we find much sensible advice. We must thank Mr. Rand for his appeal in behalf of that old, but still fine plant, the "Bridal Rose." Years ago it was one of our favorites, and has not ceased to be so yet. It is a fine room plant.

The next five chapters are devoted to Window Gardening. The general remarks on heating, ventilation, watering, &c., are in the main unexceptionable. They may be studied with profit. The remarks on potting are too meager to be of much use to the novice. This is a practical point that should not have been passed over so slightly. In regard to manures, we

must take exception to the recommendation of guano: the novice will do well to let it alone. Mr. Rand is mistaken in supposing that the red spider is seldom found on room plants. It is worse in rooms than in the green-house. The list of plants recommended for room culture is open to criticism. While many of them are certainly adapted to the purpose, many others just as certainly are not, if we take our own experience as a guide. We were never able to grow them in a satisfactory manner, and we have never seen others who could.

Next follow three chapters on bulbous roots, with lists of each. Their treatment is made plain enough to insure success. Bulbs are not only of easy culture, but among the least troublesome of plants to grow. The chapter on forcing in winter such plants as the Violet, Daisy, &c., the novice will find not less interesting. Women, however, will hardly find it pleasant to attend to out-door frames in the winter. Balcony Gardening, which follows, is invested with a good many charms, but we doubt whether it will ever become popular in this country. Several chapters follow on the Wardian Case, Hanging Baskets, Waltonian Case, and Aquaria. These are the most valuable part of the work. The chapter on specimen plants may be studied with profit. The remaining chapters are devoted mainly to out-door gardening, and, on the whole, are the least satisfactory part of the work. We must except, however, the descriptive lists, which are very useful. We must except, also, the chapter on wild flowers; for the subject is treated in an interesting and instructive manner.

We have thus given the reader a general idea of the work, which, notwithstanding some shortcomings, is entertaining and instructive. Mr. Rand's style is pleasant, free, and even polished. The vignettes are gems of art. The publishers, Messrs. Tilton & Co., of Boston, have done their part of the work most admirably. The printing is done on tinted paper by the

Riverside press, and is a splendid specimen of the typographical art.

DEATH OF HOWARD DANIELS.—We have been pained to learn that Mr. Daniels died recently at the Eutaw House, Baltimore, of hemorrhage of the stomach. Mr. Daniels was well known in New York as an architect and landscape gardener. His first public work as a landscape gardener, we think, was the Cemetery at Cincinnati. At this time he went to Europe to study the best works of art there, and returned with his mind well stored with professional knowledge. Shortly after he settled in New York, and became well established in business: He became a competitor for the plan of laying out the Central Park; and though not successful, his was among the plans to which prizes were awarded for their merit. About three years since he secured the laying out of the grounds of Druid Hill Park at Baltimore, upon which work he was engaged up to the time of his death.

Mr. Daniels died in the prime of life, being only forty-nine years of age. He was a man of great energy, and possessed a mind of considerable originality, which he had improved by hard study. He was fond of his profession, and strove to excel in it. His works, public and private, show that he possessed both taste and skill. He was a spirited writer, as his articles in former numbers of the *Horticulturist* will show. He had many and warm friends, who will lament his untimely death. He leaves a wife, but we think no children. We have been promised a sketch of his life by one who knew him longer and more intimately than we did.

GRAFTING WAX.—The grafting season is approaching, and in the midst of it we are often asked where a good grafting wax can be got. We have for several years used that made by Mr. Trowbridge, of New Haven, and have found it so entirely satisfactory that we recommend it without hesitation. He has also an excellent pre-

paration for covering large wounds made by pruning and otherwise. Something of this kind is of such frequent use, that it should be kept always on hand.

MR. DREER'S REMOVAL.—We learn that Mr. Dreer, Philadelphia, has removed from his old stand to a new and spacious store, No. 714 Chestnut Street, which he has fitted up in a handsome manner. This we take to be evidence of a successful business; indeed, we notice that seeds-men generally are doing a thriving trade. We hope Mr. Dreer will continue to sell as good seed in the new store as he did in the old one, and prosper greatly.

A NEW ERA IN PROPAGATION.—One of our cotemporaries has discovered a "big thing" in the way of propagation. A perspective view of a portion of the Kew Palm House has been copied from an English journal, and presented as a frontispiece, with the following inscription: "A southern view of a *New PROPAGATING HOUSE.*" The thing is too good to be lost. Only think of a *propagating* house a hundred feet high! Is it possible that there are any people who can be deceived with such things?

DISSOLUTION OF COPARTNERSHIP.—We notice that Messrs. Buist & Son, of Philadelphia, have dissolved partnership, and in doing this they have divided the business, the elder Mr. Buist taking the nursery and seed-growing department, and the younger the seed and implement business. This is one of the oldest houses in the country, with a well-known reputation, and we hope each may enjoy the same success that marked the firm of Robert Buist & Son.

"NEW LAMPS FOR OLD ONES."—We call the attention of our readers to the fact that we will give two new volumes unbound, for single volumes of the years 1846 to 1850, inclusive, and 1853, 1858, and 1859. Our early subscribers who

have irregular sets embracing these volumes, will thus be enabled to continue their subscriptions for many years without a further cash investment. Those who have complete sets may class them among the rare books in their library. The *Horticulturist* is not stereotyped, and but few more copies are printed than are subscribed for. As a history of horticulture, landscape gardening, rural architecture, and the progress of rural art and taste, it is full and complete, splendidly illustrated, and covers a period of nearly twenty years. Those who continue to take it may look upon it as one of the best investments that can be made, as the time will come when it will more than realize its cash cost with interest. The increase of public taste in all matters relating to rural life

makes all authority on such matters of appreciating value.

CATALOGUES, &c., RECEIVED.

Fleming & Davidson, 67 Nassau St., New York.—Descriptive Catalogue of Choice and Select Flower and Vegetable Seeds.

Peter Henderson, Jersey City, New Jersey.—Spring Catalogue of New Plants.

Catalogue of the Officers and Students of the State Agricultural College, Lansing, Michigan.—Possesses a good many valuable features.

Report of the Commissioner of Agriculture for January, 1864.

Prince & Co., Flushing, L. I.—Select Catalogue of Fruit and Ornamental Trees, Shrubs, Vines, &c.

Correspondence.

EDITOR *HORTICULTURIST*.—I wrote to you yesterday about stopping the vines at this season of the year. On going out to see the vines, I discovered a large number of bugs on a seedling grape which blossoms earlier than the others, and is now in bloom. They eat the young fruit before it is fairly set. I have killed a large number, but they are not easy to take, and I am so unwell that I can spend but a few minutes at a time among the vines.

Please tell me what they are, and the remedy, if there is any. I shall take a bowl of water next time I visit them, and let them drop into that. I caught these by putting pieces of leaves in for them to hide themselves under.

Yours, etc., M. J. PARRISH.

[Your letter was mislaid, or it would have

been sooner answered. This brown beetle is a nuisance. The remedy you propose is one of the best. You can knock them in a sheet, but the water is best. A decoction of common brown soap, with a little lime in it, will drive them off, but they will be sure to return.—Ed.]

Will you be kind enough to say in February number if the "*Bignonia venusta*" can be worked on "*Tecoma capensis*," and oblige,

Very truly yours,

CHARLES N. DOANE.

JAMAICA, L. I.

[The *Bignonia* can be worked upon the *Tecoma*. It may be done by the usual "split" grafting.—Ed.]

[We are compelled to omit much interesting correspondence and other matter, but will find room for it next month.]

THE HORTICULTURIST.

VOL. XIX.....MARCH, 1864.....NO. CCXIII.

Growing Plants in Rooms.

THE subject of growing plants in rooms, always a very interesting one, has received an additional interest since the introduction of the Wardian case; or, rather, since the Wardian case was popularized, if we may use the expression; for it is now nearly twenty years since the Wardian case was made known to the American public. Plants are grown in rooms with very unequal success by different persons, which is owing mainly to three causes: first, unsuitable conditions; second, improper selection of plants; third, want of knowledge. Having had no inconsiderable experience, in former years, in growing plants in rooms, we propose to examine these causes of failure, with the hope that we may be able to say something that will help the reader to overcome them. The love of plants may be said to be universal; and we know of no period of history in which this love has not manifested itself by the cultivation of plants, either at the window or on the top of the dwelling. We accept the fact as an evidence of the beneficence and wisdom of the Creator. It would be deeply interesting to trace the development and

manifestations of this love of plants, from its origin in the garden of Eden, up to the present time; but at present we wish to confine our remarks chiefly to the conditions under which plants may be most successfully grown in rooms.

For our present purpose, we may say that plants need chiefly sunlight, a moist air, and a moderate degree of heat. It is apparent that a room usually affords these conditions very imperfectly, and our object should be to supply the deficiencies by the best means at command. The old-fashioned fire-place and wood stove gave us a soft and mellow heat, and growing plants in rooms was comparatively easy; but the introduction of hot-air furnaces has surrounded the subject with almost insuperable difficulties. The air produced by these furnaces is so dry and exhausting, that moisture is abstracted faster than the vitality of the plant can supply it; all its functions, consequently, become deranged, disease follows, and the plant gradually pines away and dies. This is especially true of those plants that require a very humid atmosphere for their healthy growth. We have, therefore, unwillingly

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MARCH, 1864.

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been brought to the conclusion, that plants can not be well grown in a room which is heated with the full power of a hot-air furnace, if we barely except succulents; and the heat is generally too strong, if not too dry, even for these.

But, it may be asked, can nothing be done to modify this state of things, so as to make the growth of some plants possible? We answer, Yes. In the first place, let the register be so regulated that the room at no time shall become overheated; that is to say, above a pleasant living temperature. The top and bottom sash of the window should be often opened, to admit fresh air, which will benefit the inmates of the room as much as the plants. The human system can endure an overheated air but little better than plants. A basin of water placed over the register will be an additional help. A man in Newark, N. J., whose name we forget, has invented a contrivance, which he places within and near the mouth of the register. This is kept filled with water, which is evaporated into the room, and the air becomes charged with an appreciable amount of moisture. Where a coal stove is used, a basin of water should be kept on the top. Any contrivance, indeed, that will add a little moisture to the air of the room, will be found desirable. One of the best is a table, made so as to contain wet sand on the top. A little detail will probably not be unwelcome here. The table should be made strong, with rollers to the legs, that it may be easily moved from the window when necessary, as is sometimes the case on a very cold night. A movable table is also convenient in watering and cleaning the plants. The table should conform to the shape of the window; if, for ex-

ample, the window is a bay, the sides of the table should be angular accordingly. For a common window, the table may be two and a half or three feet wide, and a little longer than the width of the window. The top of the table should be on a line with the window-sill. Around the edge of the table should be screwed a piece of board, four inches wide; a narrow moulding on the lower edge will give it a neat finish. Two good coats of stone paint will be necessary to preserve the wood work. The top of the table will present the appearance of a shallow box, which is to be filled with silver sand or fine moss; or a couple of inches of sand may be put on the bottom, and the top of the sand covered with green moss from the woods, which will give the table a handsome finish. Additional beauty may be given to it by planting *Lycopodium* around the edge. The pots are to be set on the top of the moss or sand. When the plants are watered, all the surplus water and drainage are caught by the moss and sand, from which an evaporation will constantly go on, greatly conducive to the health of the plants. The sand must be kept moist at all times, and must be watered for this purpose, if necessary. The vapor, as it rises among the plants, will be found to condense on them at times during the night, and this is just what is wanted. A table of this kind is worth all the fancy stands that the ingenuity of man has invented. Plants look better on it, and they grow better.

We trust we have now given the reader some idea of the *conditions* under which plants may be successfully grown in rooms. The other points will be reserved for another article.

COUNTRY HOMES.

BY MEAD & WOODWARD, ARCHITECTS, &C., 37 PARK ROW, N. Y.

We show this month what can be done into a suburban home of elegant exterior, with a substantial old farm house; how and comfortable and convenient interior easily and beautifully it can be changed appointments.

This class of spacious and substantial Mansard roof, as shown in *Fig. 64*, are arm houses, with the gambrel, curb, or very numerous about the suburbs of New

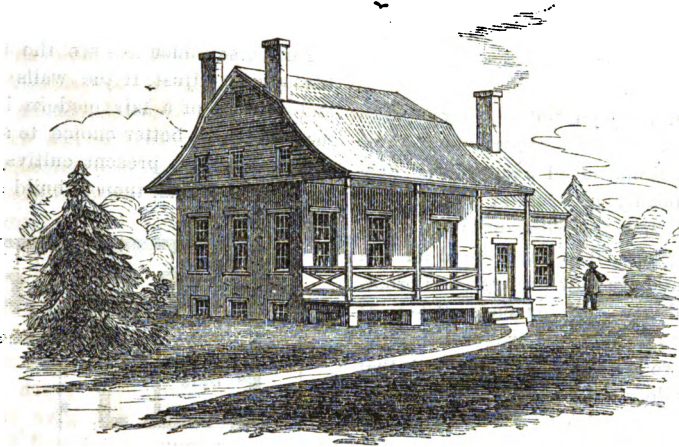


Fig. 64.—View of the Nichols House, near Englewood, N. J., at the time of Purchase.

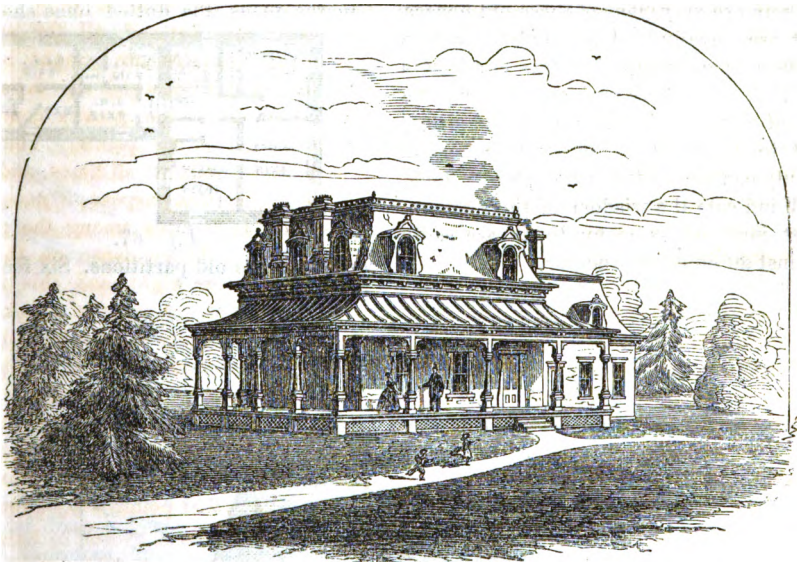


Fig. 65.—The same remodeled for Rev. T. G. Wall, by Mead & Woodward, Architects and Contractors, 37 Park Row, N. Y.

York City, and more particularly in the "neighboring province of New Jersey," where one finds them nestled in the valleys or by the road side, as best fitting to the taste of our early Dutch settlers, who prized seclusion and protection above bleak exposure and far-reaching views.

As a general thing, the better class of New Jersey farm houses of this type were built of squared and hammered red sand-

stone, laid up in regular courses, and in many instances the character of the work differed on all sides, the front being the most finely finished. And in many of the most pretentious of these houses, brick was substituted for the front, as being less common.

There is, perhaps, nothing more difficult in an architect's experience than to make a fine thing out of a subject so destitute of beauty of form or proportion, and yet preserve the substantial walls and other belongings, that have stood for half a century, and are now stronger, and promise a durability that exceeds those of other houses built in this progressive age; and yet here is a "presto change" that will almost defy the keen eyes of the old settlers to recognize any trace of the ancient landmark that for fifty years has overlooked the beautiful valley of the Tenakill.

There are very many of these old houses that are equally well adapted to wear a modern face, though but few purchasers can look through all such changes with the eye of a professional expert, and select that to which, at a low price, a certain beauty can be added, which, when done, shall indicate the wisdom of their choice. First impressions many times are sadly against all hopes of success.

"With weather-stains upon the wall,
And stairways worn, and crazy doors,
And creaking and uneven floors,
And chimneys huge, and tiled and tall."

But these difficulties are the least troublesome to adjust, if the walls are good, and ceilings of a fair modern height. It may then be a better choice to adapt such a house to the present cultivated tastes and requirements, than to build anew from the foundation.



Fig. 66.

In the plans, the dotted lines show the

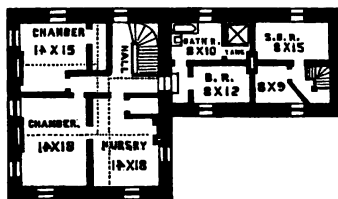


Fig. 67.

centers of the old partitions. Six feet have



Fig. 68.—Stable.

been added to the length of the wing, thus improving the kitchen accommodations. be constructed of either wood or stone.

This house is situated within a moderate walking distance of the flourishing new suburb of "Englewood," some fifteen miles from the great commercial metropolis, on the line of the Northern New Jersey Railroad, and adds prominently to the architectural surroundings of this charming and attractive locality.

In Figs. 68 and 69 we give a design for a stable for four horses. It may

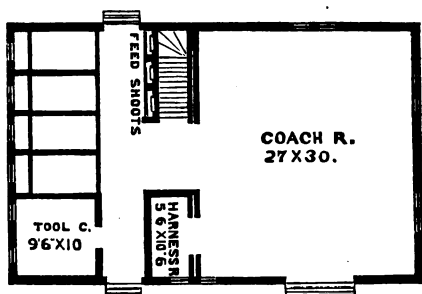


Fig. 69.

Figs. 70 and 71.—Plan and elevation of in oak, and presents an effective appearance. an entrance gate, which we have executed

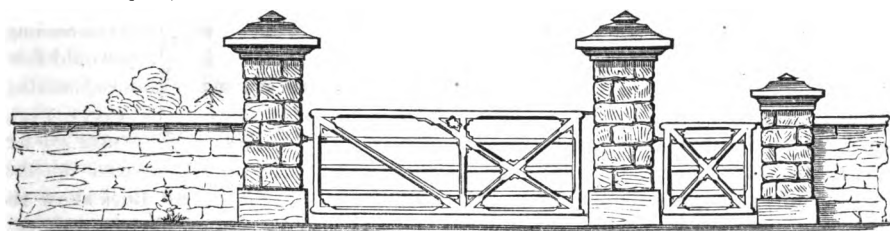


Fig. 70.—Elevation of Entrance Gate.

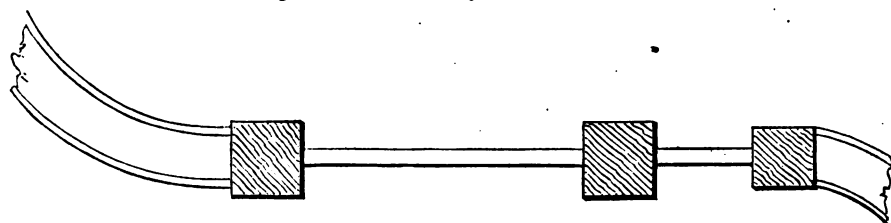


Fig. 71.—Plan.

REMARKS ON GRAPE VINE MILDEW.

BY A. VEITCH, NEW HAVEN, CON.

It is hardly possible to overestimate the mischief done to grape vines by mildew. Those, therefore, interested in their cultivation can not be too inquisitive as to the causes of that disease, and especially the means of preventing it, so far as can be known. Unfortunately for this, however, there is much relating thereto so involved in mystery as to elude the observation of the keenest investigator. We know that mildew is caused by minute fungi growing in or upon the leaves of the vine, and other delicate parts, in a truly parasitical way, which is at the expense of those parts affected. But we can not tell whence these do come; whether their seeds are carried about in the air, making no sign until a suitable resting place is found, in which to germinate and grow, under those conditions required by the laws of their being, or whether the plants upon which they grow contain those seeds,

bound up in their structures, or circulate throughout with the sap. Such questions as these, however, I am willing to leave for the learned to discuss and settle at their leisure. At the same time, enough may be known by intelligent cultivators to enable them to control some of those causes at least, the effects of which they have so much reason to deplore.

Vines, especially in city yards, or where they are not exposed to a free circulation of air, are liable to be injured by other causes than mildew. In seasons like the last, when for several weeks together the weather was excessively dry, succeeded by heavy rains, they suffered much from "sun scald," at least about here. And in general, those were most injured which were driest at the roots preceding the rains; owing, it would seem, to extreme delicacy, superinduced by too great a protection from the invigorating influence of moving air, and the want of moisture at the roots to insure a healthy growth. When in this condition, the leaves are extremely liable to be hurt by the sun shining full upon them, when wet with dews or frequent showers. In this state, also, they are liable to the attacks of mildew; for whatever tends to foster delicacy of growth, or weaken the functions of the vine, prepares the way for the advent of this enemy. Experience teaches this, else why was it that vines in city yards, as a general thing, suffered more the past season than those growing in open lots? I know of a vineyard in Cheshire, Conn., in an exposed situation, the ground sloping to the north or north-west, without any natural or artificial protection, where the vines were entirely free from mildew last year. Many similar instances could be mentioned, all tending to show that a free circulation of air is unfavorable to the growth of mildew.

It also seems evident that the way in which vines are pruned in many instances fit and prepare them for the assaults of this enemy. I refer especially to the very common practice of leaving the wood, at

winter pruning, in a crowded state. This practice, instead of insuring a valuable crop, gives the vines the chance of frittering away their strength in their efforts to perfect a superabundance of foliage and fruit, none of which they are able to do; and, consequently, their energies being overtasked, they exhaust themselves, and thus become the ready prey of mildew fungus.

To guard against this, it is necessary to prune in such a way as to secure annually a vigorous growth; which can be done by following the advice of Mr. Mead, in his "Hints," or by any other method founded in principle, although not "found in the books." By so doing, over-crowding would be avoided, and the sap would flow through well-regulated channels, causing a healthful development of every part, which, in ordinary seasons, would go far to maintain the vine uninjured to the close.

It may also be said of summer pruning, the only rational way is to begin early and do it often throughout the growing season, as, by so doing, there would be no necessity for taking much from the vines at any one time. But should this operation be neglected until about midsummer, it would be better not to prune at all, at least not until the mildew season is over, which might not be until late in the fall. We say this from having frequently observed vines so treated, or rather maltreated, suffer greatly from mildew, when others more fortunate have been comparatively exempt. In such instances, it is easy to account for the difference. It is in the fact that by taking from a vine all at once a great breadth of foliage, the due balance between the roots and the branches is destroyed, without any hope of readjustment for weeks to come, and the whole system so shocked as to cause a derangement of function, ending in general debility, which may be regarded as the certain harbinger of mildew as well as "sun scald." The leaves in a crowded state protect each other from currents of

air and the direct rays of the sun, and when deprived of this protection they are so tender that, instead of being benefited by exposure, they often suffer great harm, and cease forthwith to be of any further benefit.

Another fruitful cause of mildew is sudden and important changes as regards moisture at the roots or in the atmosphere, either from damp to dry or dry to damp; or when there is a great relative difference in this respect between the soil in which they grow and the atmosphere. Should the weather be dry in June and July, followed by heavy rains in August and September, mildew may reasonably be looked for. It is worthy of notice that vines growing in a southern aspect, or where they are likely to become very dry at the roots, are more liable to suffer than those whose roots have been kept uniformly moist. Several cases might be mentioned in support of this. In one instance, an acquaintance, for the sake of convenience, built a compost heap close up to his vine arbor, and over the roots of several vines; those showed no indications of mildew, while others in their neighborhood suffered badly. In another yard, the roots of the vines ran under a walk paved with brick, a sufficient means of retaining moisture, surely; these likewise escaped. In the vineyard already referred to, the vines were mulched with straw, and did not suffer from drouth. Such instances as these naturally suggest the propriety of properly preparing the ground previous to planting; which can be done only, in many situations, by trenching the ground to the depth at least of two feet, which will be the means of not only enabling the vines to receive a requisite supply of moisture, and not more, but also of increasing its temperature, which, apart from other advantages, would greatly tend to prevent mildew. And even in very dry weather, watering would be beneficial; but perhaps by

mulching properly it might be dispensed with.

There can be no doubt but cold in the atmosphere often brings on this disease, and I can not find any good reason for not believing that changes of temperature in an opposite direction do the same thing. This, at least, does not prevent it. It would rather seem, mildew fungus is not over nice as to any particular degree of heat, provided one or other of those causes we have endeavored to state had been at work on the vine, so prostrating vitality as to expose its delicate organs to the attacks of this subtle foe. The experience of last season seems to teach this, and is so viewed by a correspondent in a late number of the *HORTICULTURIST*, who says, "Vines mildewed from the 10th of July to the 1st of September," during which time there were "terrific showers of rain, accompanied with a hot and damp atmosphere, the thermometer for nearly six weeks standing at 90° in the shade, and heavy showers of rain nearly every day."

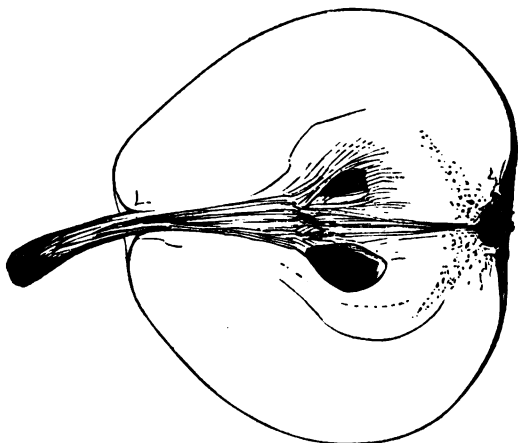
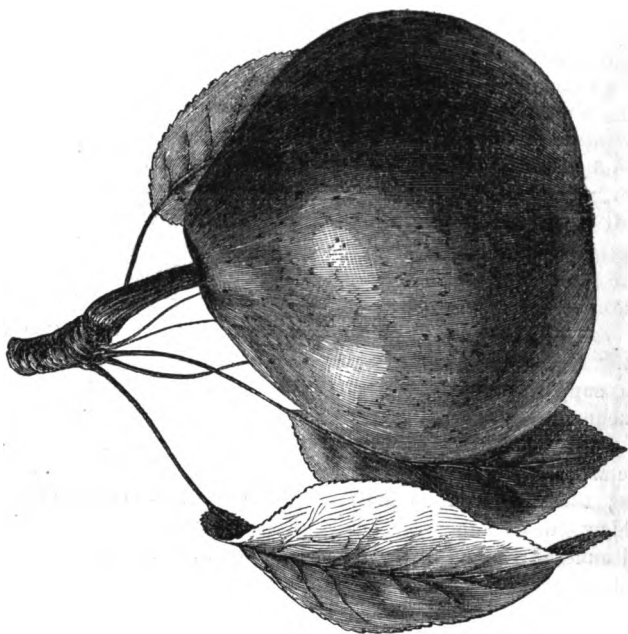
It is needless to say an adequate supply of nutritious food if necessary to the well-being of the grape vine, and when this is withheld, as often is the case with old vines, they are greatly prized by the parasite we speak of. In short, it would seem, could we maintain all the conditions of health, vines would rarely suffer from either blasting or mildew.

[We regard Mr. Veitch's article as a valuable contribution to the history of mildew. He is entirely correct in saying that "it is hardly possible to over-estimate the mischief done to grape vines by mildew," for millions of capital are dependant upon the operations of this mysterious pest. Mr. Veitch's remarks deserve to be carefully read, for they are suggestive, especially those on summer pruning. We must have protection without interrupting the circulation of air.—*Ed.*]

DUCHESS DE BERRI D'ETE PEAR.

BY THE EDITOR.

THIS is not quite a new Pear, but it is last of August and early part of September. It is rather a vigorous grower, and not generally known. It is a late summer or early autumn pear, ripening the moderately productive; but coming in at



a time when larger pears of good quality are becoming plenty, its size will be objected to by some. We regard it, however, as worthy of a place in an amateur's

collection. Our own description not being within reach, we give that of Mr. Charles Downing, which is substantially the same, with this advantage, that Mr. Downing has known it longer than we have.

"Fruit small, oblate, obscurely pyriform. Skin, yellow, shaded with light red. Stalk, short, inserted in a small cavity. Calyx, partially open, set in a broad shallow basin. Flesh, juicy, melting, with a good vinous flavor."

PLANT HOUSES.—X.

BY THE EDITOR.

We have selected for illustration this design from those heretofore given. It is a month a plant house quite different in its design and built for J. C. Johnston,

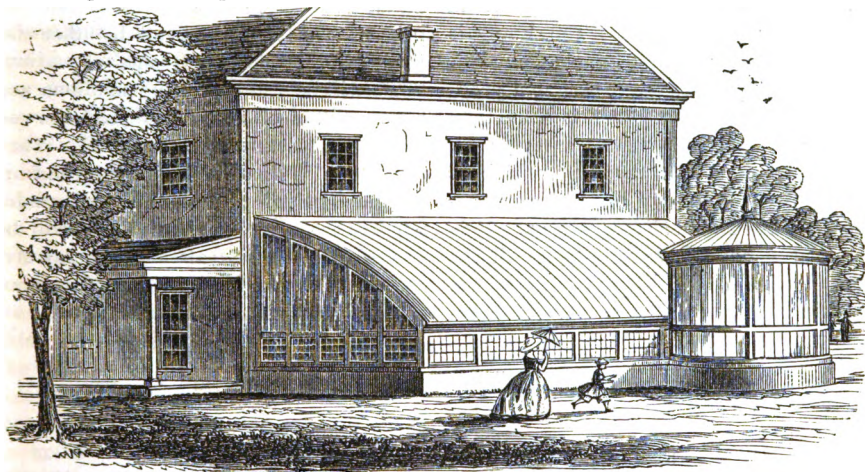


Fig. 1.—Perspective View.

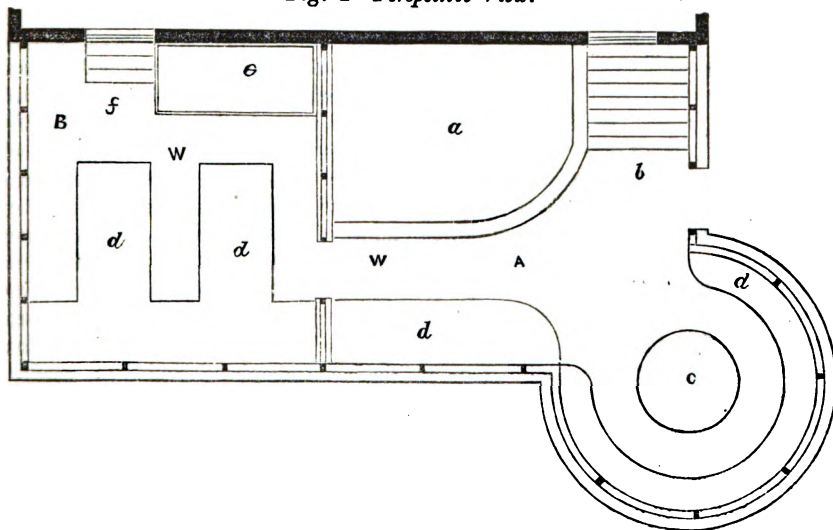


Fig. 2.—Ground Plan.

Esq., of Scarborough, N. Y. It is built on the south side of the dwelling, and is entered from the parlor as well as from the pleasure grounds. *Fig. 1* is a perspective view, which gives the reader a good idea of its general appearance, though we can not help saying that in this case, at least, the picture does not flatter; the house looks finer on the ground than in the picture. The circular house on the southeast corner is strictly an ornamental feature, and a very pretty one.

The interior arrangement is shown in the ground plan, *Fig. 2*. The house is divided into two compartments, A and B. The last is intended for growing and propagating plants. The house is heated by hot water pipes, the boiler being placed in the cellar of the dwelling, which is entered by the steps, *f*; *e* is a propagating tank, fitted with sliding sashes. It is quite large enough to propagate all the plants the owner will want; *d, d*, are beds about a foot deep, with a moderate bot-

tom heat, for plunging pots in when desired; *w* is the walk. This compartment is to be used for bringing plants into bloom, after which they are to be taken to the show room or conservatory, marked A in the plan. The arrangement of this compartment is such, that all the plants in it may be seen from the parlor door or window, the steps leading to which are marked *b*; *a, d, d*, are tables; *c* would make a pretty little fountain, but it is intended at present to put it in the form of a rustic basket, and fill it with ornamental plants. The effect can not be otherwise than good. Climbing plants of various kinds will be trained up the mullions and rafters of the circular house, and allowed to hang in festoons from the roof. When the house is filled with flowering and ornamental-leaved plants, with climbers dependent from the roof, the effect will be charming. We can already see that Mr. Johnston has provided for himself a source of deep enjoyment and comfort.

BURIAL PLACES OF SMALL EXTENT.

BY J.

WHAT a multitude of burial places there are scattered all over the country, now without suitable inclosures, open to the encroachments of cattle, without trees, grown up to bushes and weeds, small and contracted in extent, crowded with headstones leaning in all directions, telling a tale of neglect and heartlessness disgraceful to any people. May we not charitably suppose that this state of things is but a libel on the true character of many communities who suffer them to exist? It has often occurred to us that much of this neglect is owing to a want of knowledge of what to do, rather than a willingness to let such a condition of things remain. In other instances it is probably owing, in a great measure, to carelessness on the part of the people where this neglect is found, and a want of unity of action in efforts to remedy the evil. In many parts of our

country a better spirit is manifesting itself, and we are happy to think what is now doing may act as a leaven to change the whole aspect of things in this respect. May we not hope the time is not distant when a more Christian and civilized view of this matter will pervade our whole country? To such journals as your own we look, to give direction to efforts for the improvement of works of this character. With these feelings, we present to you our own case.

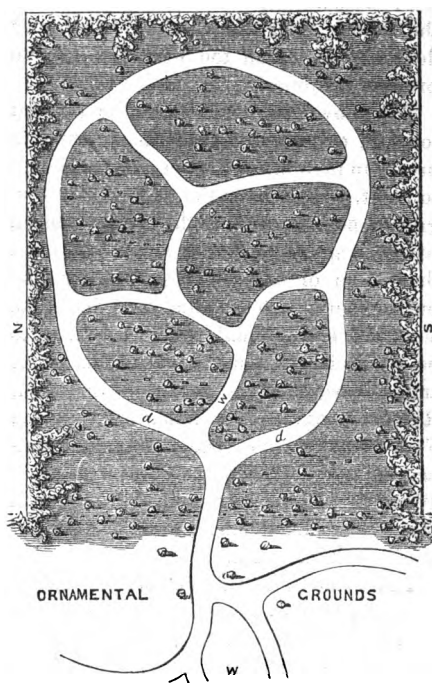
Connected with an ornamental ground of considerable extent, which is laid out in the modern style of landscape gardening, we have a piece of ground fenced off in a pen-like manner, 13 rods wide and 16 rods deep—a rectangular plot, in form a parallelogram. What a look of neglect shows itself as we look over the ground! Seven large apple trees and many smaller ones,

looking as though some money consideration retained them in their present position; a variety of straggling, unsightly trees and bushes; coarse, neglected grass, mown once in a season, for its supposed money value; a rough and uneven surface, with burials in rows across the lot, in straight lines, leaving a space through the center from north to south and from east to west, apparently designed to afford a place, at some future time, for walks in these directions. Upon this neglected spot, we are ashamed to confess, are the monuments of President Azel Backus, President Henry Davis, Hon. William H. Maynard, Professors Seth Norton, Josiah Noyes, J. Findley Smith, and others. Here, also, lie the remains of Rev. Samuel Thornton Kirkland, the early Christian missionary, who, with a prophetic view of the future of this country, provided princely gifts to found an institution of learning and science. By his side lie the remains of his Indian friend, the great chief, statesman, and humble disciple, Shenandoa.

It has long been felt that this neglect was not creditable to us, and that it was an unfair expression of the respect and affection still cherished among us to the memory of those individuals whose bodies lie buried there. At a late meeting of a few individuals interested in these grounds, it was determined to put them in good condition, and arrange a system of walks, with a drive around the whole; to plant them with choice trees and shrubs, and so to beautify them, that they shall no longer compare unfavorably with other well-arranged grounds of like character. It is designed to expend such sums of money in this improvement, and its future keeping, as may be realized from those who feel interested in this enterprise. The inclosed plan was adopted as one suitable for its improvement.

It originally consisted of about one acre of land, but to which has recently been added, by the gift of one greatly interested in the contemplated improvement,

about one third of an acre more. It is proposed to work the cemetery ground so that it will harmonize with the ornamental grounds to which it is attached. To partially disconnect the cemetery from the ornamental grounds, we design to plant groups of trees pretty thickly along the division line, but not so as to cut off



entirely a view of the monuments from the ornamental ground. It is intended to grade the whole surface to correspond with the natural slope of the grounds, and to cover it with grass, to be kept well cut, and to make good and substantial roads and walks. The other lines of the cemetery are to be planted with a good hedge, as a protection against encroachments. The drive is so arranged as to give, while passing around it, a view of the whole ground, approaching very near the boundary on the north, which is made necessary by the manner in which burials have been located. The intermediate walks are nearly confined to the points indicated on the plan for the same reason.

To break up the present stiff and formal arrangement of monuments and headstones, the idea indicated on the inclosed diagram was adopted; that is, to plant near the bounds, inside the protection hedge, an irregular screen of evergreens, with deep indentations and recesses, leaving spaces sufficient for burial lots around the whole outer lines, where the drive does not approach too near the lines to prevent so doing.

To remove the objection to the present location of burials already made, and to break up their straight lines, it is designed to plant, as shown on the plan, with evergreens, so as to divide the whole central part into spaces in extent suitable to meet the wants of any families who may be buried there. The points near the walks and road, and in front of the recesses, to be planted with choice deciduous trees and shrubs, such as the new American, Rosemary-leaved, and Kilmarnock Willows; Fern-leaved Beech, Weeping Cherry, Cut-leaved Weeping Birch, Viminals Elm, Weeping Thorn, and others, and such shrubs as Euonymus, Spiræas, Viburnums, Weigelas, etc.

The location of this cemetery is on the east slope of College Hill, and overlooks for many miles the valleys of the Oriskany and the Mohawk, the northern slope of Paris Hill, and affords a distant view of the Steuben and Trenton Hills, giving many views, for variety and beauty, which can scarcely be exceeded.

From the ground, for many miles, may be traced what is known as the old property line, extending from Wood Creek, near Rome, to a point on the Mississippi, near where the Tennessee River empties into it. This line was adopted by a formal convention, held at Rome, in 1768, and was designed as a boundary line for ever between the whites and the red men, who were then the owners of this vast territory. It now remains a sad memento of a race of people, not far back in point of time, who once owned and lived in this

fertile region of our country, and who have now disappeared from among us.

Will you please give us your opinion of our plan, and make such suggestions as may occur to you in regard to the improvements we contemplate? Perhaps, in so doing, you may help others who are in a similar condition to our own, and, like us, need your advice.

[It is only too true that the condition of our rural burial grounds is not such as it should be; and though this is unmistakably the result of reprehensible neglect, we are far from believing it to be an evidence of indifference to the memory of the dead. The causes that you assign, and others of a similar nature, no doubt operate potently; so, also, does the consciousness that our burial grounds are mostly only temporary abiding places, even for the dead; and that the so-called spirit of improvement will in a few years sweep them all away. The recent formation of Cemetery Associations is doing much to correct this evil, by turning aside this "spirit" from desecrating the cities of our dead. You have, therefore, adopted a very judicious course to relieve your burial ground from the reproach that now rests upon it. We have no doubt that you will find a general readiness on the part of your people to co-operate with you. We are much pleased with the general design of your plan. Small places are often spoiled by attempting too much. This you have happily avoided. A single boundary drive is all that should be attempted here. It approaches the boundary too closely on the north; but that seems to be unavoidable. We do not see how the line of the walks could be improved, under the circumstances. The boundary planting, with a broken outline, is very good; but avoid marring its boldness by breaking it too much into detail. The recesses formed would be appropriate for monuments. No provision seems to have been made for a receiving vault. Both the southeast and

northeast corners would be suitable places for vaults, or even the middle of the east border. The idea of dividing the middle ground into plots by evergreens pleases us very much. It is in very much better taste than those dreadful iron chains and rails. We should increase the depth of planting a little on the right and left, at the points where the cemetery grounds merge in those of the ornamental grounds, so that they shall be gradually lost in each other. The introduction of water would be an interesting feature, but there seems to be no source of supply. In

edging, let the sod come down gradually till it meets the face of the walk. We dislike a naked, perpendicular edge to a walk; it looks bad, and is not easy to keep in order. You have done the plan so well, that there is not much room for criticism. The improvements that could be made by disturbing the dead are so slight, that the thing is not to be thought of. If your trees are judiciously grouped, and the proposed improvements carried out, you will have a cemetery that will be highly creditable to the intelligence and taste of all concerned in it.—*Ed.*]

SASHES VERSUS FIXED ROOFS.

BY PETER HENDERSON, JERSEY CITY.

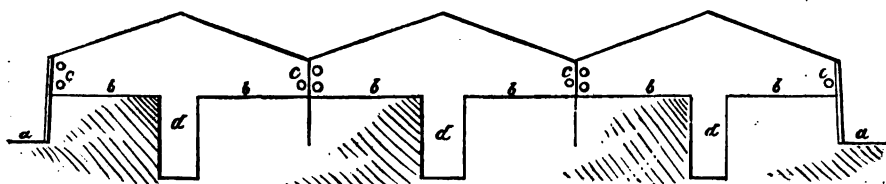
I HAVE read and examined from time to time, with much interest, your remarks and sketches of Plant Houses, and it is not to dissent from your views that I now write, although it seems to me that your ideas run all one side of the matter, for your designs and descriptions are almost exclusively of an ornamental character, and adapted only for conservatories or graperies, leaving the uninitiated commercial nurseryman or florist to look in vain for something to suit his case. I have said that your ideas seem to be one-sided, in describing only ornamental erections; they seem also so in your uniformly recommending the fixed roof principle. Now, for the purposes of the florist or nurseryman, I think there is but little doubt that the advantage is with the sash over the fixed roof. The difference in cost is trifling; probably a little in favor of the fixed roof; but balanced against that is, that your house, once erected on your favorite plan, you are emphatically "fixed." It is not portable, (unless made in sections, which is only a bad compromise with the sash plan,) and any alteration requiring to be made, your roof is of but little or no value. But the most serious objection to it is the difficulty with air. I have never yet seen a house built

on the fixed roof principle that had means of giving air so that plants could be grown in a proper manner, and I could name dozens who have been induced to build on this plan, that one year's experience has given them much reason to regret.

We are now adopting for plant houses, low, narrow, span-roofed buildings, formed by 6 feet sashes, one on each side, the ends of the houses facing north and south. These we attach three together, on the "ridge and furrow" system, as shown in sketch. This system presents great advantages, and, by using no cap on the ridge piece, air is given in the simplest and safest manner, by the sash being raised by an iron bar 9 or 10 inches long, pierced with holes, which answers the double purpose of giving air and securing the sash, when closed, from being blown off by heavy winds. There is no necessity for the sashes being hinged at the bottom, as might be supposed; all that is required being to nail a cleet along the wall plate, fitted tight to the bottom of each sash. Every alternate sash is nailed down; the other is used in giving air in the manner described.

The advantages of such erections are so obvious, that I need not trespass much on your space to enumerate them. The plan

can be adapted to detached buildings new houses, if not more than one is already up, by erecting houses of the same length alongside; or, in the erection of further extensions. I have had four



a, ground level.—*b*, bench or table on which to stand plants, $4\frac{1}{2}$ feet wide.—*c*, 4 inch pipe, 3 in each house.—*d*, pathway, 2 feet wide.

houses on this plan in operation for nearly two years, and I have never before had so much satisfaction with any thing of the kind. Intending next season to remove my green-houses from their present site, all shall be put up after this style.

[We are glad to learn that you have been interested in our plant-house sketches. Your criticisms are quite welcome. We propose to examine them briefly. It is admitted, in this case, that "our ideas run all on one side," to the extent that the designs thus far given have been mainly intended for amateurs. The reason is this: being an amateur ourselves, we are most familiar with the wants of the amateur, and we have supplied his wants first, as belonging to the most numerous class. The nurseryman and the florist are better able to supply their own wants, as they generally do, by building their own houses in their own way. But by and by we will see if we can not do something for them. The purposes of the amateur and the florist are so dissimilar, that the same house will hardly answer best for both; yet the general principles involved are the same. You object to our style of house that it is "not portable," but, when once erected, is "emphatically fixed." Precisely so; that is just what is intended. An amateur locates his house with a "fixed" purpose, and intends that it shall remain "fixed." Unlike the florist and nurseryman, he has no occasion to move it. Our house is "fixed;" yours, alas! is not. Unplanned

and unpainted, it is always rotting and tumbling to pieces, and has to be built over again every four or five years; in fact, we have seen more than one case where it was necessary to replace nearly all the principal timbers at the end of the second year. We beg your pardon; your house is "fixed;" it is being "fixed" all the time, and yet it is never "fixed." Is such a house most economical, even for florists? Those who have both kinds assure us that they are not, and among them one of the best and most extensive florists in the country. In regard to alterations, they can be made in the fixed roof about as easily as they can in the sash roof. Neither can make much of an argument here.—Next comes the "difficulty with air." Just here we beg to assure you, that with the "fixed" roof, air enough can be admitted to "blow your head off." If it is not done, it is not because it can not be. You want to keep your plants nearly dormant during the winter, and consequently must have a good supply of cool air on warm days. The amateur wants to keep his plants growing freely, and wants but comparatively little air. What is best for him is not best for you. Then, again, you want, at the end of winter, a short, lively growing season, and the means of hardening off your plants rapidly; and the sash roof undoubtedly affords you the facilities abundantly. But all this can be done very cleverly with the "fixed" roof; and as you are about building, we propose to put you to the test.

We will furnish you with a plan for a house or section, which you shall build to the "letter." If it does not do all that is claimed, we will take it down at our own expense.—In compactness and general economy, the "ridge and furrow" presents some decided advantages for the florist. The accumulation of snow in the ridges is an objection, but not an insuperable one. Yours would be more economical if made a little wider.—Ed.]

VENTILATION OF GRAPE HOUSES.

BY WM. BRIGHT, PHILADELPHIA.

THE most simple, convenient, and efficient method of ventilating grape houses which we have ever been able to devise, is shown in the following engravings.

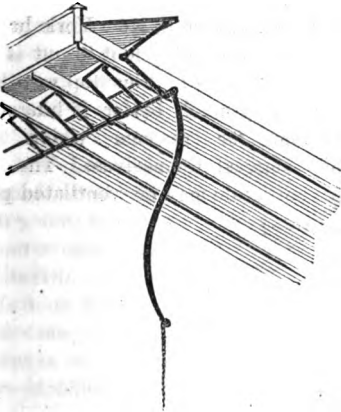


Fig. 1.—Top Ventilator.

The top ventilator is formed by a sash, all in one piece, running the whole length of the house, and opened at one motion, by simple machinery.

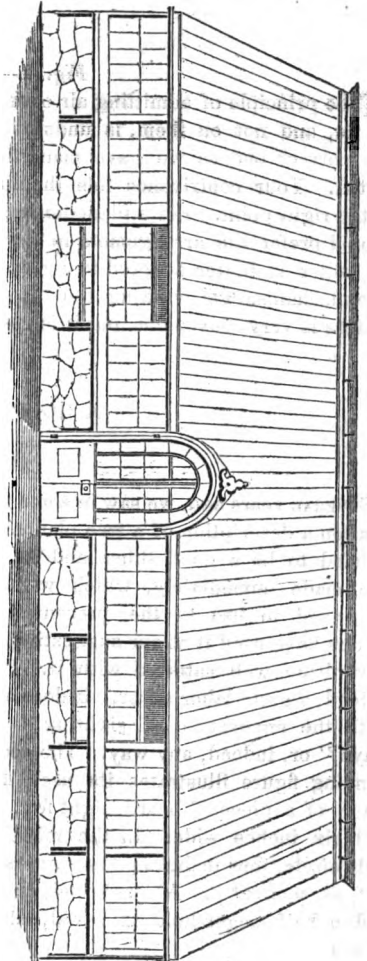
The front, or bottom ventilator, is only four inches wide, and is placed almost up to the glass, so as to carry the stream of fresh air over the plants. This is also opened and closed by a crank and shaft, with iron elbows, and is all the front ventilation that will ever be found necessary.

Another method of making the front ventilation is shown in the engraving of a lean-to vinery, lately erected in this city.

The sashes in front are hung with ropes and weights, like window sashes, running down, (not in closed-up cases,) in front of

the wall. This method of forming the front ventilator gives a more elegant ap-

Fig. 3.—Lean-to Vinery. Front and Top Ventilator.



pearance to the house, but in no other

respect is it better than the four-inch ventilator made of wood, as shown in *Fig. 2*. The top ventilator, in *Fig. 3*, is the same as shown in *Fig. 1*.

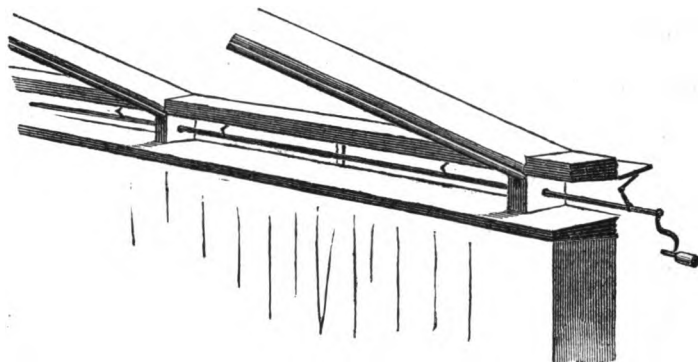


Fig. 2.—Front Ventilator.

[The principle of admitting air over the plants, and not on them, is undoubtedly the correct one, as we have many times stated. Your contrivance lets the air in at the right point. For a plant house, we should prefer the arrangement in *Fig. 3*; the other is better adapted to a grapery. The mechanism for working the top ventilators is very convenient, but it is costly,

a similar contrivance in New York having cost *one dollar* a running foot to put it up. Will yours cost less? Your top ventilator would be very much better if hinged at the bottom, for reasons which will naturally suggest themselves. The subject of ventilation may be ventilated profitably.—*Ed.*]

A GOOD TREE PLANTER.

BY THE EDITOR.

SEVERAL years ago, we saw in some publication a description of a tree planter. It seemed to be a good thing, and we had one made immediately, which we have continued to use to the present time. Others have used it at our suggestion, and have been well satisfied with it. It is, indeed, a great labor saver. It does away with the annoyance of sighting "both ways," or, indeed, any way. The accompanying figure illustrates its use. It is made of a piece of board eight feet long and six inches wide. In the middle, a half circle, four inches in diameter, is cut out, as seen at *c*. At each end, an inch and a half auger-hole is bored, shown at *a, a*.

A description of the manner of using it will not be out of place. A number of

stakes will be needed, which should be six or eight inches long, and rather more than an inch in diameter. It is of no con-



sequence whether they are square or round. They may be split from pine boards, or small branches or saplings may be cut from the woods into proper lengths. Now, suppose a row of trees is to be

planted. First, stretch a line for the row, and measure off the distances at which the trees are to be planted. At each place, and close to the line, drive in one of the small stakes. Now take up the line. This much has to be done whether the tree planter is used or not. The next operation consists in placing the tree planter against the stake, so that the latter comes in the middle of the upper edge of the semicircle, when a stake is to be driven in the hole at each end of the tree planter. The whole row is to be gone over in this way; and it can be done in half the time that it takes to describe it. When the holes are dug, the size is marked around the middle stake, which is then removed. The earth should be thrown on one side, so that when the planter is put down again it shall rest on the level ground. We will suppose that the holes have been dug, and the trees are ready to be planted. The planter is to be placed over the two end stakes, which were not removed. The semicircle will be over the middle of the hole. The tree is to be held straight against the middle of the semicircle, (just where the middle stake stood,) and the filling in done in the usual way. (See the figure.) When the row is finished, it will be found to be a

perfectly straight line, provided the stakes were all in line.

In this way, a single tree or a whole orchard may be planted, and each tree will occupy the precise spot where the stake was driven. So, too, if a tree is to be taken up, and another put in its place, it may be done with the certainty of having the new tree occupy the precise spot where the old one stood.

The chief advantage of the tree planter consists in saving the time and labor of sighting rows of trees, to get them in line; for in using this simple contrivance they must line, if the stakes are put in the right places. The rows must be laid off and staked, whether the planter is used or not; and the only additional labor consists in staking the planter at each hole; but the planter can be placed at twenty stakes while a single tree is being planted in the usual way.

The planter may be used with equal facility for planting shrubs, &c. It may be made of a smaller size for this purpose, if desired, but we use only one. Having used it quite extensively, we give it an unqualified commendation. If we knew the name of the inventor, we should take great pleasure in giving him credit for such a useful instrument.

FARMERS' GARDENS.

BY WILLIAM BACON, RICHMOND, MASS.

THE time when any thing like a comfortable garden was scarcely known among farmers is yet within the memory of many, of not the very "oldest inhabitants." In those days many, very certainly, had a patch inclosed near the dwelling, which was called the *garden*, whose products inventoried, first and principally, potatoes, a few hills of beans, strips of land two feet wide and ten feet long were severally appropriated to beets, carrots, and onions, with a few hills each of cucumbers, squashes, and a sufficient space for from

twenty-five to fifty cabbage plants. These articles, when the men performed the labor, were usually planted or sown soon after the corn and potato planting in the field was ended. If the labor was performed by the women of the household, it was done rather earlier, in the "odd spells" left from other labors.

These gardens were usually poorly attended. The men did not like the small work of weeding onions and carrots. Of course they were neglected, while the potatoes and cabbages (these were more

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substantial articles) were hoed in about the same proportion of time as were the field crops.

The result was, these gardens afforded their owners but very little pleasure in summer, or profit in autumn, or comfort the following winter; for in the former season neglect licensed weeds to grow without restraint. In autumn, these weeds, of which the beggar louse and pig weed were competitors for ascendancy, so nearly covered up all that it was designed should grow, that an attempt at harvesting would have been any thing but a pleasant or compensating employment. In winter, the tall, dry stalks of these rival weeds told plainly of the fertility of the soil which had given them sustenance, and that they had won their victory over it, almost without effort or obstacle.

The fruits of these gardens consisted mainly of a row of currant bushes, whose roots were protected by turf and weeds, which grew in matted clumps, and knew no other pruning than that afforded by the few straggling sheep or cattle that might run there in early winter; and a few pear trees—real native fruit—whose products so far defied inroads of pilferers, that the swine, if turned in among it, would turn away in disgust. Whether the quaint saying, “root hog or die,” had its origin with some father or more tender and affectionate mother, when they saw their hopeful offspring brought to the alternative of choking on these vile products or adopting the rooting system, we have never been advised; but if such counsel were actually given under the circumstances, it speaks better for the instinct of the animal that rejected the fruit, than for the reason of the man who allowed a tree of so worthless a character to cumber his grounds.

Such gardens as we have described are not without their existence now, though we note it as a beautiful feature in the progress of the age, that they are each year diminishing in number. Yet, how many of the good, well-to-do farmers of

the present time deprive themselves of many of the beauties and comforts, to say nothing of the luxuries the garden might bring them, almost without money or price? How few of the real cultivators of the soil have ever tasted a cauliflower, or any of the varieties of melons, unless they obtained them in market; or how many have feasted on the better kinds of pears? Take the wide sweep of really independent farmers, and how often can we find in their gardens, or yards even, one grape vine to hang out its clusters and invite them to their healthful feast? It is not because farmers do not like berries, and pears and grapes, as well as others do, that they neglect their cultivation. It is not because they have no leisure time to care for them that they do not go into the cultivation of them. Although there are periods in every season when their business presses so that rest appears like an object never to be attained, yet there is no class of men who have more leisure moments than the painstaking, go-ahead farmer; and if the majority of farmers have not an equal amount of time for relaxation from the labors of the field, the fault is too often their own.

It is a truth sufficiently evident to be well established, that the most business men very often have the best gardens. They commence them for relaxation from other and more engrossing cares, and for the cheap and pleasant amusement they afford; and as they progress, the comfort and profit of the thing leads them forward.

Comfort! How much is implied in the word! It is synonymous with health, and the surroundings that lead to secure it to its possessor. The inhabitants of cities, and villages, and close workshops very well imagine what it is, when they inhale the pure air of the fields, or taste the vegetables and fruits, fresh from their gatherings. And, in appreciation of it, they do not fail, so soon as circumstances will enable them, to feast upon them fresh, the products of their own hands.

Then why do not all farmers, who have land enough and means enough for its improvement, admit themselves and their families to the pleasures, the comforts, and profits of the garden?

It is a matter of congratulation that so many of this class are waking up to the subject, and we hope that this improvement will become contagious, and spread, until every homestead will be adorned with its vines and fruit trees, and that choice vegetables will become as common as their merit demands.

[Mr. Bacon draws a strong picture, but there is only too much truth in it. It is

pleasant to know, however, that this kind of gardening is gradually disappearing, while in its place we see something more tidy, better arranged, and very well stocked with a choice class of fruits and vegetables, that add greatly to the comfort and health of the household. There is no reason, outside of themselves, why the great mass of farmers should not fully enjoy all the luxuries which a garden is capable of affording, equally with the millionaire, and at a much less cost. If Mr. Bacon's article should meet the eye of a farmer who has not a neat and well-stocked garden, we hope he will resolve to have one at once.—Ed.]

EXOTIC FERNS.

BY WILLIAM J. DAVIDSON, NEW YORK.

THE attention of horticulturists having been increasingly directed, of late years, to this lovely class of plants, than which few are of more easy management, I would, Mr. Editor, agreeably to your expressed wish, offer a few remarks on their cultivation. We often see in a stove-house large numbers of young ferns, growing in all imaginable places, and are apt to wonder how they came there; but when we take a frond with its seed or spores fully ripe, and examine it, our wonder merges into admiration at the beautiful adaptation of nature for their dispersion. We find it covered with almost microscopical seeds, which float off on the least breath of air, and, alighting on some place favorable for their germination, soon become the beautiful plants we admired. To grow ferns from spores, then, we must imitate nature as nearly as possible; and probably the best way is to fill a pot about three parts full of rough peaty earth, and shake the frond or spores over it, and cover with a piece of glass, to prevent evaporation, placing the pot in a saucer of water, which will keep the soil moist enough by capillary attraction. In a week or two, we will see small green

scales begin to form on the surface, and in a short time the young fronds begin to appear. The glass may now be gradually removed, and as the plants increase in size and strength, they may be potted off singly into small pots.

With stove and green-house ferns, the same necessity exists for a period of rest, (induced by a lower night temperature in winter and spring,) as in that of the hardy species. We often find this important point overlooked, and in consequence of two or three years' growth being compassed in one season, the plants get spindly and weak, and a slight change or exposure to sunshine or damp at once destroys or disfigures them.

The compost used for their growth should be chiefly peat or leaf mould and sand. A liberal admixture of cocoa fiber is very desirable; indeed, ferns seem to revel in such a mixture, and many of the more delicate and finer varieties grow as they never grew before, when planted in the pure, unadulterated fiber. Moderate-sized pieces of turfy loam may be used with those of stronger growth, as it retains moisture longer than peat does, and causes the fronds to grow shorter and

stouter than if grown in peat alone. A liberal supply of broken pots, freestone, or charcoal may be added, to keep the mixture porous and secure proper drainage, and the compost, except for small pots, should not be sifted.

Shade is, if possible, a greater necessity here than in their out-door management. This is easily managed by roller-blinds or mats, which should be removed on every safe opportunity.

In common with all other plants, ferns often suffer as much from superabundance of water as from want of it. A too common impression prevails that they may be unsparingly watered, and, in consequence, many of the more delicate kinds, especially in winter, perish. The fronds should never be allowed to droop; but as soon as the surface soil looks and feels dry, enough water should be given to wet the ball thoroughly; not a little at a time, and often, as we sometimes see done. Ventilation should also be regularly attended to, especially in hot weather, as a stove fernery, though shaded, would soon become unbearably warm in bright sunshine, while the intense heat would destroy or disfigure many of the tenderer varieties. A slight syringing overhead (except on the succulent and hairy kinds, which should not be wet) is very beneficial, and in hot weather the plants will soon show their gratitude for it, by increased color and luxuriance. It also assists greatly in keeping down thrip, which, with brown scale, are the great pests the fern-grower has to contend with. The thrip soon shows his unwelcome presence by disfiguring the fronds, which should at once be sponged with blood-warm soap and water, or the most infested fronds entirely removed, and the plant dipped in a weak solution (about two ounces to the gallon) of the Gishurst Compound, or carefully fumigated till the insect disappears. *Brown scale* should be removed by hand, while young and light colored, as, if allowed to remain till old and brown, it is merely a cover for microscopic thousands

of young ones, which, falling as dust over the other fronds, form new colonies for future extirpation. *Mealy bug* also sometimes shows itself, and should be destroyed in a similar manner.

From such a large class, when all are so interesting and beautiful, it is hard to make a selection. The following, however, will, I think, be found of easy cultivation, and will amply repay the slight attention required to grow them to perfection. Those marked with G. will stand a minimum temperature of 45 degrees.

Acrophorus hispidus, G., and *immersus*, C.

—Very beautiful and easily grown plants, with finely divided, light green fronds. Avoid sprinkling or syringing these varieties.

Anemidictyon frazinifolia, G., *tomentosa*, and *phyllitides*, G.—Very distinct and handsome flowering ferns, with contracted spike-like fertile fronds.

Adiantum, or Maiden's Hair Fern.—One of the most graceful and beautiful of the whole genus. They have all divided, light green fronds, and are particularly well adapted for vases or hanging baskets. The most showy are *A. affine*, G., *cuneatum*, G., *concinnum*, *caudatum*, *curvatum*, *cardioclana*, *formosum*, G., *macrophyllum*, *intermedium*, and *trapeziforme*.

Aleuritopteris Mexicana.—A most beautiful fern, with the habit and appearance of a *Chelanthus*.

Alsophila radens and *Australis*.—Lovely, large-growing species, combining the grandeur of a tree-fern with a very elegant divisional appearance.

Asplenium.—This family contains many beautiful and well-known varieties, all worthy of a prominent place. The following are the most desirable: *A. bulbiferum*, G., *axillare*, G., *Belangeri*, G., *cicutarium fragrans*, G., *Otites*, G., *falcatum*, G., *præmorsum* and var., *Canariense*, G., *reclinatum*, G., *viviparum*, and *dimorphum*.

Aspidium, *Lastrea*, and *Nephrodium*, comprise a large family, all so nearly alike, that we may rank them all under the head

of "Aspidium." They include many of our most elegant ferns, and are all worthy of cultivation. The most useful and ornamental are : *A. glabellum*, *Canariense*, *G.*, *patens*, *G.*, *augescens*, *G.*, *decompositum*, *G.*, *album-punctatum*, *molle*, var., *corymbiferum*, *coriaceum*, *G.*, *capense*, *G.*, *pubescens* *falcatum*, *G.*, *caryotideum*, *G.*, *trifoliatum*.

Blechnum.—Beautiful evergreen ferns, of bold habit. Fronds with short stalks, arising from a tree-like stem. *B. Brazilianense*, *G.*, *corcovadense*, *occidentale*, *G.*, *glandulosum*, *G.*, *pectinatum*, and *longifolium*, are all well deserving a prominent situation.

Cibotium Barometz and *Scheidei* have very stout, long, brownish, hairy stalks, bearing very elegant, spreading, thrice divided fronds.

Cyathea medullaris.—A noble and very distinct tree fern, with numerous long-pointed, dark scales on its crown and stalks.

Cheilanthes.—Exceedingly beautiful and elegant ferns, indispensable in every collection. Very impatient of syringing or drip. The following are general favorites : *elegans*, *G.*, *farinosa*, *G.*, *Hirta* and var., *Ellisiana*, *G.*, *lindigera*, *radiata*, *frigida*, *G.*, and *spectabilis*.

Drynaria coronans, *quercifolia*, and *morbillosa*.—Most attractive and handsome dark green ferns.

Davallia Canariensis, *G.*—The beautiful and well-known "Hare's Foot Fern." *D. bullata*, *G.*, and *dissecta*, *G.*, are also very beautiful, and make handsome specimens.

Gymnogramma.—The striking and beautiful "Golden and Silver Ferns" rank high in every fern fancier's estimation, and are all easily managed. The following are the most easily procured golden vars. : *ochracea*, *G.*, *sulphurea*, *Martensii*, *chrysophylla*, and *Lacheana*. Silver vars. : *pulchella*, *tartarea*, *dealbata*, *Calamelanos*, and *Peruviana*. *G. tomentosa* and *rufa* are also favorites with many cultivators.

Goniophlebium appendiculatum, *G.*, and *sub-auriculatum*, must not be overlooked, the fronds of the former having rich crim-

son mid-ribs and veins, while the latter is one of the best ferns we have for hanging baskets, having graceful drooping fronds from three to six feet in length.

Hemionites palmata.—An ivy-leaf shaped, extremely pretty, and distinct fern, bearing viviparous plants on its fronds.

Hypolepis repens, *G.*—A well-known handsome fern, with spreading, hairy, light green fronds, excellent for suspending.

Lygodium scandens, *G.*—An exceedingly elegant climbing fern, forming a dense cover of slender and graceful foliage.

Nothochlæna.—A very elegant family, rather difficult of management, owing chiefly to their dislike of moisture on their fronds. Closely allied to *Cheilanthes*, which they much resemble. The prettiest are : *lanuginosa*, *trichomanoides*, *nivea*, (silver fern,) *flavens* or *chrysophylla*, (golden fern,) and *Eckloniana*.

Onychium Japonicum.—A very slenderly-divided, deep green fern; should be in every collection.

Polypodium.—A large and distinct family, bearing very prominent fruit dots on the fertile fronds, and comprising many choice and useful kinds. The principal are : *pectinatum*, *G.*, *plumula*, *G.*, *effusum*, *G.*, *concinnum*, *iridioides*, *phymatodes*, *Billardieri*, *aureum*, *G.*, and *frazinifolium*.

Pteris.—Very distinct and ornamental ferns, including many indispensable varieties : *P. geraniifolia*, *ternifolia*, *hastata*, *G.*, *rotundifolia*, *G.*, *lonifolia*, *G.*, *sempinnata*, *cretica*, *albo-lineata*, *argyræa*, *G.*, *aspericaulis*, var., *tricolor*, *scaberula*, *G.*, *tremula*, *G.*, and *arguta*, *G.*, are the most conspicuous and choice varieties.

Platyserium alaicorne and *grande*.—Stag's Horn Ferns. Very interesting ferns, with entire, hoary, light green, fertile fronds, the sterile fronds always prostrate and very distinct. May be grown on mossed blocks of wood, care being taken to keep the blocks well moistened.

Woodwardia or *Doodia caudata* and *aspera* are very pretty little tufted ferns, well worthy of a place in every collection.

Though not ferns, strictly speaking, the large family of *Selaginellas* deserve a passing notice. They are plants of a most attractive and elegant appearance, and include a great variety of form and hue. Many of the species may be used for surfacing large pots, and most useful are: *S. Africana*, *atroviride*, *densa*, *cæsia*, *circinalis*, *denticulata*, *G.*, *lævigata*, (*cæsia arborea*), *inæqualifolia*, *G.*, *lepidophylla*, *Lyalli*, *Schotti*, *G.*, *stolonifera*, *G.*, *umbrosa*, *G.*, *Willdenovii*, *G.*, *serpens*, and *Brazilensis*.

[We must thank Mr. Davidson for complying so promptly with our request for an article on exotic ferns. He has made the subject quite complete, and given a list that is not only good, but easily got, as they may all be bought at a reasonable price of those who grow ferns for sale. Spores or seeds of some of them may also be bought. We should be glad to see ferns more generally grown than they are. Many of them grow finely in plant cases in rooms,—Ed.]

WAYSIDE THOUGHTS UPON ARCHITECTURE.

BY ARTIFICER.

Architecture.—It may be well that we can affirm, in reference to general matters, that the things we love best we know most of. It might be well for us to affirm this much of the distinctive art of architecture, did there not occur so many inconsistencies in our profession and practice of it. While it is true that we can point proudly to works that will stand the test of analysis and criticism in all departments of the art, it is no less true that we are far from realizing its whole worth—all it would bring us if better cultivated and encouraged. How largely and intimately it enters into the concerns of social and domestic life, its wealth of refining influences and impressive language.

Nowhere, that I know of, has architecture found the favor it deserved, of the many institutions of learning scattered through the length and breadth of our beautiful land. No one is exclusively dedicated to it. Not even its rudiments are taught in our academies and colleges, where music and painting are considered as essential to a finished education. It may be that this is mostly due to architects themselves, who have neglected to diffuse both the "spirit" and the "letter" of architecture among their countrymen.

I do not believe, with some, that there is any lack of genius on our part powerful enough to control a growing development in architecture, for no land ever gave birth to fairer or better.

Egypt could boast because her river gods ruled and her bondmen wrought. Greece could boast because her temple piles and graceful columns were dedicated to her gods. Rome could boast as long as her "Cæsars" were patrons and the world tributary. America may boast more than all these.

Architecture is understood to mean the "art or science of building," or constructing buildings for all purposes of man, including the domestic, civil, and devotional; so that architecture and building are classed as one and the same thing, when they are as distinct in their offices as painting and sculpture.

Form, in architecture, is the sign or signs of skill, utility, or convenience, and discovers the relation between the symbol and the thing symbolized, and hence means more properly the act of designing for the formation and adornment of buildings upon scientific and art principles. This definition naturally resolves itself into two heads, viz.: designing for the construction of buildings, and design-

ing for their adornment. The former is restricted in its operations to such rules as practice and science have instituted, and a repetition of these rules only is required for all like subjects. While the latter can not be so restricted, it is comparatively limitless in its operations; it may reach as far as the conception of the intellect can reach. Its only landmarks are fitness and proportion; these give beauty; its ruling star, "genius."

Had I time to reflect upon the origin of architecture, we might see how its first principles, in the process of development, became, or gave birth to, second principles. And these, associated in practice under the control of national taste and requirement, became phases, classes, or styles of art, as the Egyptian, Grecian, Roman, Byzantine, Gothic, and Italian styles. It is undoubtedly true that the ancient Greeks derived their first principles for their beautiful system of columnar architecture from what is technically termed the "*primitive hut*," formed of the trunks of trees set upright on the ground, at regular intervals from each other, with rough beams laid horizontally across their tops, and transversely over these smaller ones, exposing to view their naked ends, having a roof of poles and bark over all, as protection from the sun's rays or storm. This simple form, so far as the purposes of utility were concerned, was almost perfect, but was wanting in finish and beauty. So far, constructive skill and requirement had been at work. Afterward, as the mind could conceive the relations between the useful, symbolized in the beautiful, new elements were born into life, which, in the changes of time, under a system of proportion, new conceptions, and increasing care, became the almost "miracles" of perfection and beauty handed down to us under the titles of Doric, Ionic, and Corinthian orders of Architecture.

The "Hut," as a type of all subsequent development, became classed in reference to its parts. Its upright supports, when

succeeded by others of grace and symmetry, were styled columns; its horizontal beams, architraves decorated with mouldings; and the space occupied by the ceiling timbers outside was appointed for a frieze; the jutting rafters or inclined roof timbers became carved modillions; the projection of the roof gradually assumed the proportions of an elegant cornice and entablature.

Thus we see the primitive Hut, before it took upon itself a tasteful character, was not architecture; though realizing nearly all the requirements of utility, it could not be architecture until there was proportion to place instead of disproportion; fitness where it was not; harmony for discord, and richness for poverty.

I allude thus briefly to the supposed origin of Grecian Art, that the reader may the more readily distinguish between buildings and architecture; otherwise I might trace it stage by stage, in its glorious ascent over the stepping stones of civilization, mingling its ripe influences with those of Roman, Byzantine, and Italian architecture, until their combined influence and efforts irradiated the whole hemisphere of art.

As a fine art, architecture stands in the first rank, since nearly every science contributes more and more, and, I might say, is necessary to its perfection.

The "store house of nature" has not that which it can not use, and no intellect has or ever can be found powerful and comprehensive enough to mould its last, fitting, and perfect form. It is progressive and far-reaching in its tendencies, because intertwined with the religious, social, and civil elements of society, and it says for each what they can not say for themselves, were its presence wanting. It will point out the church, the domestic dwelling, and the court-house, with all the precision and significance of language; in fact, it *does speak*, in a language whose "*thoughts breathe and words burn*." It wields, too, a moral power, and is the source of many refining influences, inasmuch as it frequent-

ly lifts our thoughts and aspirations above a common level, and turns them toward the contemplation of that "Infinite Power" who fills so vast a space with such varied forms. The purity of its types, which have served us so well as models, and well springs from which to draw, are every way worthy the assiduity with which our predecessors have labored and wrought, and it would be well for us did we strive to imitate more closely their example. The success they achieved under greater disadvantages than we could possibly encounter on the same road, should greatly encourage and whet our efforts. The art-loving

Greeks nurtured architecture tenderly, wrought carefully and beautifully, and reared magnanimously for posterity. They knew not all the sublime forces that told her laws, yet they knocked, and the doors were opened; they perseveringly sought and found, and in the strength and purity of their great faith each mountain barrier was removed and outlier spanned, and the way once rugged and insecure, lined with bramble and bush, became a gentle eminence paved with mosaics of art, of rare device, at whose summit sat its "Goddess." What do we not owe to classic Greece, and who does not love her!

HOT BEDS.—II.

BY THE EDITOR.

It has been suggested that a few remarks on the general management of hot beds would be very acceptable. An early hot bed, or one started in January or February, requires pretty constant attention. Two things require to be kept constantly in mind: first, that the bottom heat shall not die away; secondly, that the frost be kept out by sufficient covering. Loss of heat will not often occur when good material has been used abundantly; it seldom occurs in a good pit; it more frequently happens in a bed made on the surface. It may occur from deficiency of material, from poorness of material, from careless exposure, or from defective covering at night. There are two ways in which it may be restored: first, by making a number of holes in the bed, and filling them with hot water. When this has been done, the bed should be shut up tight, covered warmly, and remain so till the presence of steam gives evidence of a restoration of heat, when the usual routine may be resumed. The heat will sometimes return in a few hours; at other times not for a day or two, and it may even become necessary to repeat the application of hot water, but not often. The second mode

of restoring the heat, consists in cutting away the outside of the bed, and applying fresh hot manure in its place. This should be well covered with coarse litter. It will help the process materially, if holes are made in the sides of the bed, which will allow of the ready access of heat from the fresh manure, and restore fermentation to the whole mass. If the bed, however, is in the first instance properly made of good material, and unnecessary exposure avoided, all this trouble will seldom be called for.

A sufficiency of covering is a very important matter. Straw mats make an excellent covering; so do woollen blankets, litter, &c.; but whatever the material may be, it should be sufficient to shut out the cold effectually, and prevent the loss of heat. Coarse litter should be placed around the frame up to the very top of it. In very cold weather the covering should be put on before the sun has left the bed, especially if the wind be sharp from the northwest. The covering should be secured by laying boards on it, or otherwise, to prevent it from being blown off. We have known the heat of a bed to be lost in a single night in consequence of the

mats being blown off. Look to this matter, therefore, carefully and constantly. The mats should also be kept on mostly during very cold, cloudy days. In moderate weather, the beds may be uncovered though the sun do not shine, provided the wind is not too high. The object to be kept steadily in view, is to give the growing plants all the sunshine and light possible, and at the same time run no risk of losing the heat. It will be necessary to put the covering on at night till about the first of April. It should not be removed in the morning till the sun is well up.

The subject of ventilation may next be alluded to. In very early beds, this requires almost constant attention. Such beds are usually made up of a large mass of material, in order to insure a strong heat; and this makes ventilation a very delicate matter, especially while the bed is fresh and the plants are young. An experienced gardener will judge of the heat pretty accurately by simply raising the sash; but it is well to keep a thermometer in the bed; and if it be a self-registering one, so much the better. For Cucumbers, for which early beds are made, a temperature of about 80° is a very good one. For most other things, about 70° is much better. When the sun is well up, the beds should be examined, and as the heat increases the sash should be raised a little, say about an inch at first, to be increased towards midday, and lowered again towards night; but the sashes must all be shut down tight at least an hour before sundown. During some days the sashes will not need to be raised at all. The ob-

ject of ventilation is to prevent the temperature from becoming too high; for if to the rich soil and moist, stimulating air a very high temperature be added, the plants will grow spindly, and come to nought. The sashes, therefore, must be raised when the temperature increases rapidly under a bright sun, and lowered as the sun declines; being careful, all this time, not to allow the heat to escape too rapidly. What is wanted is a pretty high but uniform temperature. It will be needful for the novice, at first, to give both his judgment and attention to this matter pretty closely; but in time experience will make it simple and easy. When a small amount of ventilation is needed, the prop should be placed at the head of the sash; when more is necessary, place the prop at the side. In the latter case, the prop should be placed on the side opposite to that from which the wind is blowing. The wind will then blow over the sash, and not into the frame, and the danger of chilling the plants will be avoided.

The majority of plants grown in hot beds are to be transplanted to the open air, and it is therefore necessary to "harden them off," as it is called. This is done by gradually increasing the amount of ventilation as warm weather approaches, until at last the sashes are left off altogether, when there is no longer any danger of frost. What has now been said, it is hoped, will give the reader a pretty good general idea of the management of a hot-bed. The special treatment of cucumbers, cauliflowers, &c., will be given in separate articles at some other time.

NEW OR RARE PLANTS, &c.

Our list of foreign plants is made up from the *Journal of Horticulture*, *Curtis's Botanical Magazine*, *Floral Magazine*, &c., to all of which we desire to give credit.

ARISTOLOCHIA LEUCONEURA, (Pale-veined Tree-Aristolochia.)—*Nat. ord.*, Aristolochiaceæ. *Linn.*, Gynandria Hexandria.

Native of New Grenada. The flowers are produced in clusters on the lower part of the trunk; limb of the flower purple, beautifully netted with yellow lines. Blooms in the stove during September.—(*Bot. Mag.*, t. 5420.)

PELAGONIUM BOWKERI, (Mr. Bowker's

Pelargonium.)—*Nat. ord.*, Geraniaceæ. *Linn.*, Monadelphia Decandria. Native of the Trans-Kei country, in South Africa. Graceful in foliage and flowers, but the latter are devoid of striking color; they are tinted partially flesh-color and partly yellowish green.—(*Ibid.*, t. 5421.)

SCHIZOSTYLIS COCCINEA, (Crimson Schizostylis.)—*Nat. ord.*, Iridaceæ. *Linn.*, Triandria Monogynia. Native of watery places in British Caffraria. Flowers crimson, blooming late in autumn.—(*Ibid.*, t. 5422.)

MIMULUS REPENS, (Creeping Monkey-Flower.)—*Nat. ord.*, Scrophulariaceæ. *Linn.*, Didynamia Gymnospermia. Native of extra-tropical Australia, and as far as Victoria, and then in Tasmania. It is also common "in saline situations, and muddy banks of rivers in New Zealand." It will probably require the protection of a cold frame in winter. Its flowers are lilac, partially dotted with yellow.—(*Ibid.*, t. 5423.)

SOLANUM ANTHROPOPHAGORUM, (Cannibals' Solanum.)—This is one of the condiments eaten with human flesh by the cannibals of the Fejee Islands. Such flesh, they all acknowledge, is most indigestible; and the fruit of this plant, called by them *Boro dina*, somewhat resembles the Tomato, but having an aromatic smell, is employed to assist digestion, and its leaves are wrapped round the flesh previously to its being baked.—(*Ibid.*, t. 5424.)

RHODODENDRON, *Princess of Wales*.—Prevailing color, dark mauve, shading off to a white throat. Its truss is large, and altogether the variety is superior. Raised by Mr. Young, Milford Nurseries, near Godalming.—(*Floral Mag.*, pl. 177.)

RHODODENDRON, *Countess of Devon*.—Ground color white, with rosy edge, the upper petals being spotted with purplish crimson. The truss is large, and the flowers well formed.—(*Ibid.*, pl. 162.) It does not seem to be a very striking variety.

ROSE, *Baron de Rothschild*.—Brilliant

crimson, very large, and very double.—(*Ibid.*, pl. 178.)

GLOXINIAS.—*Lady Emily Villiers*, pink ground, darker toward the throat, which is white; center of lower segments have a band of white spots. *Lady Victoria Howard*, mauve, toward the throat brownish crimson, throat white; center of lower segments have an irregular band of white lines. *Mademoiselle Suzanne de la Bouvillerie*, segments of corolla dark lilac, throat white. They were raised by Mr. Breeze, and are now in the possession of Messrs. E. G. Henderson & Son.—(*Ibid.*, pl. 179.)

ACHIMENES.—*Purpurea elegans*, claret color, throat orange. *Leopard*, pale crimson, throat orange, spotted with crimson. Raised by Mr. Parsons, of Welwyn, and now possessed by Mr. B. S. Williams, Paradise Nursery, Holloway.—(*Ibid.*, pl. 180.)

AZALEA, *Louise Van Baden*.—Pure white; shows a slight tendency to sport. Flowers large and well formed, and of remarkable substance. A splendid variety, of Belgian origin.—(*Ibid.*, pl. 158.)

AMARYLLIS, *Regina spectabilis*.—Supposed to be a cross of *A. regina* with *A. spectabilis*. It is of robust growth and deciduous in character. Color dark crimson, with a white stripe down the petals.—(*Ibid.*, pl. 159.)

DISA GRANDIFLORA.—A splendid terrestrial Orchid, a native of the Cape, and first flowered in England by Charles Leach, Esq. Spike eighteen inches high, with large flowers of great brilliancy.—(*Ibid.*, pl. 69.) We doubt whether this Orchid is yet in this country.

BOURBON ROSE, *Rev. H. Dombrain*.—Supposed to be from Louise Odier and a dark Hybrid Perpetual. Fine form, large, with regularly-disposed petals. Color vivid crimson.—(*Ibid.*, pl. 163.)

Of home productions, we do not hear of much in addition to those mentioned in our last. We are very much inclined not to put any thing in this list unless it has been properly endorsed by some Horticultural Society, or we have some personal

knowledge of it. In England they manage such things much better than we do.

PHLOXES.—Last season we received a collection of seedlings from Mr. Isaac Buchanan, of New York. They were an uncommonly fine lot, and it would be easy to select a dozen of first-rate merit. Mr. Buchanan, we understand, will send out the best of them this spring, under name.

STAR IPOMŒA, (*Ipomœa (Quamoclit) cocinea.*)—Under the name of *Star Ipomœa*, the seeds of this plant are being sent out by Mr. J. Wesley Jones, of Chatham Four Corners, as a novelty. This is a mistake. It is an old inmate of the garden, now mostly superseded by better kinds.

PETUNIAS.—The blotched and striped varieties of the *Petunia* are destined to become popular. Mr. Buchanan will send out this spring some very fine ones, under name. They are excellent bedding plants, but used in this way, the double and single should not be mixed in the same bed. Mr. Henderson will also add to the list of good ones.

YOKOHAMA SQUASH.—The seed of this very fine Squash, introduced by Mr. Hogg from Japan, will be for sale this spring by our principal seedsmen, Mr. Hogg having placed it in their hands. We have already noticed it. It should be extensively grown.

MONTHLY CALENDAR.—MARCH.

Orchard, Fruit Garden, &c.—This is a busy month among fruit-trees. If they have not been scraped and cleaned, it should not be longer neglected. Continue to look after and destroy the nests of the tent caterpillar and canker worm. The nests of the latter will increase as the weather grows milder. Look well, too, after the borer. Pruning generally may now be done. If the orchard is to be plowed, it may be done as soon as the frost is well out of the ground, but not while the soil is wet. The beginning of the month is a good time to commence propagating the vine from eyes, under glass. The vineyard should be looked over, and trellises, wires, &c., put in order for spring. Vines that were pruned and covered last fall, should remain so for the present. Those that were not pruned last fall, should be pruned now. Grafting the vine may now be done better than later in the season.

The Grapery.—In warm days, top ventilation may be needed in the *Cold Grapery*, to prevent the buds from being excited. In other respects, every thing will remain quiet for the present. Any work to be done in the way of repairing, painting, wiring, &c., should be finished before the vines begin to grow. The *Hot Grapery*

must be carefully looked after. If the vines are in bloom, do not syringe them, but keep the air moist by wetting the floor of the house. Thinning out should be done as soon as the grapes are the size of small peas. Handle the bunches as little as possible. Pinch in as needed, and take out all unnecessary growth, while it is very small. The shoot from the top bud should have some freedom of growth. Give top ventilation when needed, but only moderately.

Green-House.—Attend to ventilation and watering, as directed last month. Plants that are intended to be removed to the border will require more air than others. All kinds of bedding plants may now be propagated freely. Camellias, while making their new growth, should not be crowded. Azaleas will now be coming into bloom rapidly. Give them plenty of room, and water regularly and fully. A few *Caladiums*, *Begonias*, &c., may be repotted and brought forward. Destroy insects, which will now multiply rapidly, if let alone. Look over the plants generally, and repot such as may need it. Seeds of many annuals and biennials may be sown in the green-house for early blooming in the border.

Plants in Rooms.—Attend to watering,

&c., as directed last month. Plants that are making a new growth should be placed nearest the light, while those in bloom or dormant, may be farthest from it. Seeds of half-hardy annuals, &c., may be sown in shallow boxes, set near the window. They should be transplanted into small pots as soon as out of the seed leaf. Kill insects on their first appearance. Verbenas, Petunias, Geraniums, &c., may be propagated.

Ornamental Grounds.—Drive and walks should be put in good order. The lawn may be raked off toward the end of the month. Shrubs, &c., may be pruned. Finish repairing fences, &c.; draw off all rubbish, and put every thing in good order. If trees and shrubs are to be planted, locate them, and dig the holes. Borders and beds may be forked up as soon as the ground gets dry. Apply old manure when needed.

Vegetable Garden.—In this department work will begin in good earnest. Hot-beds may now be made for general sowing

of seed, such as Tomato, Radish, Lettuce, Melon, Cucumber, Cabbage, Broccoli, Cauliflower, Pepper, Celery, Egg Plant, Potatoes, Beans, &c. Sow the seed in drills, but Melons and Cucumbers may be sown in small pots. Never use cold water for watering hot-beds. Ventilate during the middle of the day, and shut up early. Cover the glass warmly at night. (See article on Hot-Beds.) Fork up the garden as soon as the ground is dry, toward the end of the month, and sow Peas, Potatoes, Onions, Leek, Windsor Beans, Beets, Carrots, Cress, Lettuce, &c. Transplant from cold frames Lettuce, Cabbage, and Cauliflower. Cold frames should be uncovered during pleasant days all the winter, and at this time should be left uncovered also at night, unless the weather should be quite cold. Finish clearing up rubbish, hauling manure, and clearing up generally, so as to be prepared for good weather, if it should come this month, which we now judge, however, will not be the case.

EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

WE desire to say, Mr. Knowlton, that our issue with you is not that we know much or little about grape culture; that point has been already decided; but the issue is, that you have made a wretched use of the labors of others without the customary acknowledgment. That is the point, and it is a very grave one for you. For a man to disown the "fountain" from which he drew his own inspiration, is very much like a child disowning his father. This thing is getting to be a disgrace to horticultural literature, and we mean to

denounce it in proper terms, no matter who the offender may be, or however "vulgar" it may be thought to do so. Vulgar! why the truth is always a vulgar thing to some men. When you have any proper explanation to make, you can have the use of our columns to make it.

CROWDED.—We are so much crowded again this month, that we must ask the indulgence of our correspondents. Some communications, requiring immediate notice, will be answered by mail.

THE METROPOLITAN FAIR.—We would earnestly call the attention of our readers to the great Metropolitan Fair, to be held in aid of the Sanitary Commission. It is a subject that appeals strongly to our patriotism and humanity. Our brave soldiers have been stricken down by disease and the bullets of the enemy, and languish for the sympathy and comforts that we are abundantly able to give them. Let conscience for once have her perfect work. We appeal to all our Nurserymen, Florists, Amateurs, Farmers, and Gardeners, to send in their trees, vines, plants, flowers, &c., and let the women convert them into blessings for our sick and dying soldiers. So shall God bless you all more abundantly than ever. We print below the Circular of the Floral Department, which we hope will be read, and responded to in a liberal manner.

Floral Department of the Metropolitan Fair.
—It is proposed to have a Department in the Metropolitan Fair, devoted exclusively to the sale of Bouquets, Baskets of Cut Flowers, Plants in bloom, Seeds, Roots, Slips, Grafts, &c.; and the Floral Committee appeal to all Gardeners, Florists, owners of Private Green-houses, Nurserymen, Farmers, and persons possessing Rare Plants, to contribute them.

A conspicuous place will be assigned in the Fair to such donations, and the names of their givers will be attached.

Bulbs, Seeds, and all imperishable articles, can be delivered previous to March 28th, at the Receiving Depot, No. 2 Great Jones Street.

Bouquets, Baskets, and Cut Flowers, in every form, are to be sent, during the two weeks of the Fair, to the Palace Gardens, between Sixth and Seventh Avenues, Fourteenth Street, New York, for the Floral Committee, on such days as may be specified by the donors as more convenient, and as may afford a daily supply of fresh flowers for sale. Transportation will be furnished free by the principal Express Companies. It is particularly desired that,

when practicable, the flowers may be sent already arranged.

An answer to this communication is earnestly requested, stating what contributions may be expected, and at what times, unless the givers can allow the Floral Committee to name the days.

And surely the ministry of these bright tokens of our Father's love will be doubly blessed, when, after gladdening our senses, their avails shall serve to raise the suffering soldier to health, or to comfort and soothe his dying hours.

They are gifts which Heaven daily renews, and the flowers gathered to-day will be replaced to-morrow, fragrant with the memory of a good deed.

All communications (unless otherwise specified in an accompanying note) may be addressed to Mrs. Geo. Fred. Betts, Ladies' Floral Committee, 241 East Twenty-fifth Street, New York.

Committee of Ladies—Mrs. G. F. Betts, Mrs. Robert S. Howland, Mrs. Robert Colby, Mrs. Albert Gallatin, Mrs. Carl Schurz, Mrs. Thorndike, and other Ladies.

Committee of Gentlemen—Mr. Augustus Belmont, Chairman; Mr. George C. Gray, Mr. Edward Potter, Mr. Lydig Suydam, Mr. Isaac Buchanan, and other Gentlemen.

MISSOURI HORTICULTURAL SOCIETY.—We are indebted to some friend for the late proceedings of this Society. They are very interesting, but we are too much crowded to give an abstract this month.

MR. LANE'S AGENCY.—We would call attention to the purchasing agency of Prof. Lane. To those who wish to employ an agent to make their purchases, we know of none better. His natural tastes and business capacity well fit him for the particular line of business he has taken in hand, and we commend him to our readers as a reliable and faithful man, prompt in all his engagements.

CATALOGUES, &c., RECEIVED.

Transactions of the New York State

Agricultural Society, with an Abstract of the Proceedings of the County Agricultural Societies. Vol. xxii., 1862.—Just received. Col. Johnson will please accept our thanks.

Transactions of the Massachusetts Horticultural Society for the Year 1863.—Worthy of a more extended notice, which we shall endeavor to give next month.

Transactions of the Essex Agricultural Society, (Massachusetts,) for the Year 1863.—The *State* is in this time, for which we thank you. We must recur to these Transactions again.

J. M. Thorburn & Co., 15 John Street, New York.—Annual Descriptive Catalogue of Vegetable and Agricultural Seeds, &c.

Alfred Bridgeman, 876 Broadway, New York.—Descriptive Catalogue of Vegetable Seeds, &c. Also, Descriptive Catalogue of Flower Seeds, with practical directions for their Culture and Treatment.

Henry A. Dreer, 714 Chestnut St., Philadelphia.—Garden Calendar for 1864, &c., with select Lists of Seeds, Trees, and Plants.

B. K. Bliss, Springfield, Mass.—Spring Catalogue and Amateur's Guide to the Flower and Kitchen Garden, &c.—The illustrations are well done.

James Vick, Rochester, N. Y.—Illustrated Catalogue of Seeds, and Guide to the Flower Garden, &c.—We can not help saying that the engravings are finely done.

Geo. Baker, Toledo, Ohio.—Descriptive Catalogue of Fruit and Ornamental Trees Shrubs, Vines, &c.

Francis Brill, Newark, N. J.—Catalogue of Summer Flowering Bulbs and Roots for Spring Planting, &c.

J. Knox, Pittsburgh, Penn.—Price List of Small Fruits, &c., for the Spring of 1864.

H. B. Lum, Sandusky, Ohio.—Illustrated Catalogue of Flower Seeds, Cuttings, &c.

Vilmorin, Andrieux, & Co., Paris, France.—General Wholesale Price List of Garden and Agricultural Seeds. Also, Wholesale Price List of Flower Seeds. Ferdinand Korn, Agent, 170 Fulton St., New York.

Correspondence.

EDITOR HORTICULTURIST—Sir—It seems to me, as it doubtless will to you, a piece of temerity for one of limited information and experience comparatively, in Horticultural lore, to question or qualify the statements of yourself and Dr. Grant, to whom generally we are accustomed to look as oracles. I shall, however, claim the protection of my good intention, which is the same as yours, doubtless, to develop the facts in Horticulture. It is well-nigh passing into an adage that nurserymen and horticultural writers are the biggest liars in the land, so different are their assertions. I don't adopt this sentiment, but attribute all their differences and discrepancies to the effect of soil, climate, and treatment. I am strongly impressed with the idea that you nor the Dr. don't make sufficient allowance for these, and sometimes adopt as a demonstration, what in a

different section and circumstances may not hold good at all. Dr. Grant says the Concord is offensive, and has a tough, acid center, and intimates that no one with a decently refined taste could find pleasure in eating them. Also says the Anna is exceedingly rich and vinous in flavor, not surpassed by any grape; that it is healthy, vigorous, &c., and you endorse both these, which is doubtless true under the circumstances in which you have seen them; but is the farthest from the truth with others, and under different circumstances. Here the Concord ripens beautifully and thoroughly, and is esteemed very good, even beside Delaware. Here the Anna is worthless; will not grow under the best treatment, and all of our amateurs have not been able to make it bear enough, scarcely to taste; but so far as tasted, the impressions are not the best. So of the Mulberry. I

might say it is esteemed with the Blackberries, *humbugs*. Time would fail me to tell of all these, that in high hope we have planted to awake to bitter disappointments.

If a man should read Grant, Mead, Hussman, Knox, Deliot, and Campbell, &c., and attach equal veracity to each, it seems to me he never could decide which grapes or strawberries to plant. I attribute all this to the tremendous influence of climate, soil, &c., and that at least a partial remedy is to be found in fully recognizing this fact in all catalogues, descriptions, &c. Fully recognized, it will lead to inquiry before planting; and proper selections and proper treatment, lead to success, and success to universal planting and plenty of good fruit. An aid to this end may be found in encouraging reports from all parts of the country from Horticulturists, even if they don't know every thing and, like the writer, not accustomed to write; and to set the example, I will close by saying that here Delaware is good all the time, grows, bears, is healthy and A No. 1 to eat. Allen's Hybrid, with me, grows well, is a delicious and handsome grape, but inclined this year to mildew. Cuyahoga grows well, but mildewed badly. Concord grows strong, bears well; some of my bunches weighed three-quarters of a pound; ripened thoroughly; skin exceedingly thin, with no pungency in it, and though not the best, a very delightful eating grape, even beside Delaware and Allen's Hybrid; will fall some from the bunch when handled. Hartford grows well, ripened a week before Creveling, is foxy, and only good, if one is hungry for grapes. Creveling is a rampant grower, bears well, and is a fair grape, among the best of early grapes., Rogers' No. 19, good grower, large showy grape, but with me about third quality. Can't give it the reputation Mr. Brehm does as to quality. Diana grows well; fruited first time this season; skin tough, with a strong feline taste. I wait in hope with it. Mead's seedling grows well, is much like, if not the same as Catawba; if any difference, a little later, and not quite so good. I can give it a shorter name—*humbug*. Rebecca, Rogers' No. 15, Lincoln, and others

are not in fruit yet; all grow fair and healthy. My Union Village and Lenoir have not grown so well. Catawba and Isabella were rather poor; our tastes are getting rather beyond them; still a perfect Catawba is very nice. R.

Chillicothe, O.

[It is not safe for any except a close and attentive reader to criticise the opinions of others. This is the first time we ever heard that "it is well-nigh passing into an adage that nurserymen and horticultural writers are the biggest liars in the land," and we take occasion to repudiate it as a gratuitous libel. There are, no doubt, occasional instances of deception and misrepresentation, as in all other trades and professions; but, as a class, there are no more honorable, upright, and intelligent men any where to be found than among "nurserymen and horticultural writers." It can not be expected that all men should agree in matters of taste; some latitude for difference of opinion must be allowed, without calling in question a man's honesty. Now let us examine your position for a moment, and see how far we adopt "demonstrations." Dr. Grant has repeatedly traveled over the West, and we presume bases his opinion on what he has thus seen. We know that we, at least, make abundant allowance for the conditions you name. We are constantly receiving fruit from all sections of the country; and we find some kinds to be uniformly good, some uniformly bad, some good in one section and not in another, and some to vary in a minor degree. We therefore think we are in a good position to give a fair opinion of the current fruits of the day. We think, also, that two men, each speaking for his own locality, may give somewhat dissimilar opinions of the same fruit, without having their veracity brought into question. Taste, too, has something to do with a man's opinion on the subject of fruit. This, with us, in regard to grapes at least, is only at the beginning of a pro-

gressive stage. A man who has all his life been accustomed to the wild grapes of the woods, may at first stick up his nose at even a Cannon Hall Muscat. But all this is changing.—Can you point to the place where we have recommended the Anna for general cultivation? We have said that the Anna, when ripe, is a rich and high-flavored grape; and so it is. It is otherwise when not ripe. We have recommended it to be grown where it will ripen, but not elsewhere. We have said that it does best in a warm, sheltered place, and requires a long season; and that is the case. Are not these “sufficient allowances?” It seems to us that a discriminating man may read Grant, Mead, Hussman, Knox, &c., and decide what to plant without impugning the veracity of either. As to the quality of grapes, they all substantially agree, though some of them differ widely as to which is the most profitable for market. The influence of climate, soil, &c., does not come in at this point at all. In your conclusions on grapes, we can not perceive that you differ materially from any of the gentlemen you have named, and you must therefore come in for a share of your own denunciations, unless you withdraw them.—Ed.]

Dear Sir:—I have prepared ground for planting 2,500 vines in the spring. My preparation consists in draining, the tiles being laid four feet deep and thirty feet apart, with a descent of one foot in twelve or more, and trenching about twenty-six inches deep, honest measurement. My soil is rich loam, a little inclining to gravel, with a fine sod, which yields excellent hay, having the mold or fertile portion about one foot deep. The trenching has been done with a spade by an Englishman, who delights in the work, and he has made an excellent job of it. As the work was in progress, no enrichment was worked in, but the foot of sub-soil that is now snper-soil, has been since worked and fertilized. I propose to plant 1000 Delawares, the best plants that I can get from single eyes; 1000

Iona, and 500 Diana. My latitude is about one degree north of New York. The Isabella and Diana ripen well with me. My purpose is to grow grapes for the table, and I would produce none but the best in their best degree of excellence. I hope to add one acre at least, each year, to my vineyard, but not any more than I can have done so well that you will say it need not be better. A few remarks from you will be gratefully received, and especially any suggestions as to improvement, or showing where I am in error. If not in deeply now, good guidance may lead me safely out. I have read your “Hints,” and extracts from your lectures, with interest that is always increasing, and my proceedings have been shaped in accordance with them.

With respect,

VINEYARDIST.

P. S.—If you will call on me when next you pass, or will make the visit for that sole purpose, you shall not go away with your pocket lighter in consequence. I shall esteem a consultation with you on the ground a pleasure, and an advantage imposing pecuniary obligation.

[You have happily a soil naturally adapted to the growth of the vine. We presume your exposure is equally good. Your preparation is excellent, insuring the permanence of the vine and the perfection of the fruit. When some vineyards, badly prepared, will be showing signs of premature age, yours will be still in the vigor of youth. We hope, in enriching your soil, you have not forgotten to add a little muck. In your future treatment, be careful not to overstimulate your vines. Your selection of grapes for the table is the best that you could have made. We can not perceive wherein you have made an error; so far from it, we think you are in the high way to success. We came very near seeing you last fall. We shall embrace an early opportunity of doing so, for we feel no little interest in your success. Something might suggest itself on the ground that does not on paper.—Ed.]

THE HORTICULTURIST.

VOL. XIX.....APRIL, 1864.....NO. CCXIV.

Growing Plants in Rooms.—II.

Our former article was confined to the consideration of the *conditions* under which plants may be successfully grown in rooms, and we trust that some light was thrown on the subject. The mention of light, however, reminds us that we omitted to say any thing about light; an omission that we will now supply. Light, the warm, vivifying light of the sun, is so necessary to the health of plants, that nothing will compensate for its absence. No plant that is grown in a room can receive too much of it. Let it stream in, therefore, through every pane, unobstructed by curtain or blind, that it may revel among the plants to which it gives life and beauty.

Some windows, of course, are better than others. The best of all is that which faces the south, since it receives the sun longest. The next best is that which faces the southeast or east. The next, west; and the least desirable of all is one that faces the north. The larger the window, the better. It should not be under a piazza or verandah, or the plants will inevitably grow spindly and weak. If in the city, a window on the second or third

floor is better than one on the first, since it will receive more light. A bay is the best of all windows, as it is the lightest of all. A bay, indeed, may be inclosed so as to form a receptacle for plants but little inferior to a green-house. We wonder that this is not often done. A moist air would thus be obtained for the plants, and the sun would ordinarily furnish sufficient heat. When this was not the case, and especially at night, the inclosing sashes or doors might be thrown open, and the plants would receive the warmth of the room. Outside shutters or blinds would be very desirable, to be used at night. We may illustrate a bay of this kind hereafter. Of whatever kind the window may be, provide for and admit all the light that is possible.

Let us now pass to the second cause of failure, *improper selection of plants*. This has more to do with the want of success in growing plants in rooms than is generally supposed. It is not to be expected that an inexperienced person should be able to make a judicious selection of plants for this purpose; neither is it to be expected that the florist should always be right in his

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APRIL, 1864.

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recommendations; in fact, he is sometimes wrong, though his knowledge will enable him to say rather what will not do than what will. Of the many lists of plants that we have seen recommended for rooms, very few indeed are free from serious objection. This arises chiefly from the fact that these lists have been mostly prepared by persons who have had no experience in the room culture of the plants they recommend. We do not say this of all, because we know better. If we could command in a room the same conditions that obtain in a greenhouse, it would be safe to recommend the same plants for both; but these conditions are by no means the same in both; and that all plants do not succeed equally well in both is a fact within the experience of every man and woman who has ever grown plants in a room. At the time we grew plants in a room, we went through the whole catalogue of plants, and may therefore be supposed to know something about them. We mention this fact, simply that the reader may understand why we speak so confidently.

We now propose to present a brief list of plants which we know to be well adapted to room culture. It will comprise only those which we have grown well and with comparative ease, but most of which we have seen others grow well under similar conditions. It may be stated in general terms, that plants that require a very humid atmosphere, such, for instance, as *Caladiums*, *Begonias*, (the *Rex* family,) *Marantas*, &c., will not do well in rooms, except they are inclosed in a case; while, on the other hand, those that delight in a warm, dry air, such as *Cacti*, *Mammillaria*, &c., do finely. There is a class of plants that come in between these, that also do well. The *Camellia* is often recommended as a good room plant; but it is by no means such, being grown there with the utmost difficulty. We have seldom or never seen a well-grown *Camellia* in a room.

We think we shall place at the head of the list, in view of the large satisfaction it

yields, the *Azalea*, one of the gayest and most beautiful of flowers. All the *Cacti*, *Epiphyllums*, *Mammillaria*, *Aloes*, &c., do well in rooms. All are singular in their forms and growth, and many produce large and brilliant flowers. In this class is included the Night-blooming *Cereus*. The *Calla* is also a good room plant, and so is the *Hyacinth*, *Crocus*, *Narcissus*, *Tulip*, *Ixia*, *Babiana*, *Oxalis*, *Lachenalia*, and most other bulbs, not forgetting the *Cyclamen*, one of the best of them all. Here, too, must be placed the *Laurustinus*, and also, but not quite so good, the *Pittosporum*. Better than the last, but much neglected, is the *Coronilla*, with its pretty yellow, pea-like blossoms. The *Heliotrope* does very well near the light, and is indispensable for its grateful fragrance. So, also, is the *Daphne*, but it is not so easily grown. And while among the fragrant flowers we must not forget the *Gardenia*, *Orange*, *Lemon*, *Magnolia fuscata*, and *Carnation*. The *Scarlet* and sweet-scented *Geraniums* are nice room plants, and easy to grow, but the *Pelargonium* is not. The latter may be flowered after a manner; but a small truss of bloom on a long, spindly shoot is far from attractive. Just here very naturally come in the *Cuphea* and *Bouvardia*, the former an admirable room plant of the easiest culture. Alike beautiful and easy to manage is the *Chinese Primrose*. Its proper place is the front of the table, where its white and purple flowers will cheer us all winter long. For the back of the table we can have *Abutilon striatum*, a tall growing plant, with large pendent flowers. For a middle position, nothing is better than the *Chorozema*, with its handsome pea-like flowers. The *Bridal Rose* (*Rubus*) is another desirable plant, resembling a Raspberry, with double white flowers.

A few climbers will be needed, and these may be found in *Passiflora cerulea*, a singular and beautiful flower, the best of its class for a room. The *Wax Plant*, (*Hoya*), a curious, but by no means sweet-scented flower. We may also add *Mau-randya Barclayana*, with showy tubular

flowers of a bluish white color. The *Kennedy Marryatta*, with scarlet, pea-like flowers, also does very well.

But a collection of plants would hardly be perfect without the *Rose*. Fortunately, there are a few that do well in rooms. These may be mostly found among the Tea Roses, such as *Goubalt*, *Bougere*, *Leveson Gower*, and others. Of Bourbon and China Roses, *Hermosa*, *Malmaison*, *Queen*, *Phanix*, *Daily*, and *Agrippina*, are the best, and bloom finely. The Hybrid Perpetuals do not grow very well in rooms. The best that we have tried is old *La Reine*.

There are many annuals and biennials that do well, the following being some of the best: *Mignonnette*, always a favorite for its delightful fragrance. *Sweet Alyssum*, a sweet, modest little plant, with small white flowers, that smell like new honey. *Lobelia*, (*gracilis*, *erinus*, *speciosa*, *ramosa*, etc.) a charming room plant, producing masses of beautiful little blue flowers. *Candytuft*, (*Iberis*), a very desirable plant, with flowers from purple to white.

There are several hardy plants that bloom finely in pots, and are extensively used in this way by florists. They bloom

nearly or quite as well in a room as they do in the green-house. Some of the best of these may be noticed. *Spiraea prunifolia*, when in bloom, is a complete mass of white, with its tiny double flowers. Not less beautiful is *Spiraea Reevesiana*, both the double and single. If the double-flowering *Dwarf Almond* be placed between these, a very pleasing contrast is produced. The *Deutzia gracilis* is a beautiful dwarf shrub, covered with handsome little white bell-shaped flowers. The *Dielytra spectabilis* is a charming herbaceous plant, resembling a *Pœony* in growth, and bearing long racemes of singular but beautiful flowers, very inappropriately called by some, *Bleeding Heart*. There is also an old but little known plant, named *Daphne cneorum*, a small, low growing evergreen shrub, highly prized for the beauty and fragrance of its bright pink flowers.

We close the list for the present, though there are not a few other plants that may be added that are nearly, if not quite as good for room culture; but we do not think we should add more to the list of hardy shrubs, except it be the *Weigela rosea*.

PLANT HOUSES.—XI.

BY THE EDITOR.

WE present this month an illustration of a house which we designed some three years since, and which has given no little satisfaction. It is a propagating and forcing house combined, and has fully answered the purpose for which it was designed. It is not of large size, being only 30 feet long and 20 feet wide; but its capacity for work is greater than its dimensions would lead one to suppose.

Fig. 1 is a perspective view, from which the reader may infer that it is a very neat and well-proportioned house. It has a fixed curvilinear roof laid in aquaria cement, the best material for glazing that we

have yet seen. There are no side lights, but the stone foundation is built up above ground, terraced, and sodded, which sets the house up, and avoids what is called a "squat" appearance.

Fig. 2 is the ground plan. The house runs east and west, the object being to use the north side for propagating purposes. A room is partitioned off at the east end for a boiler pit, seed room, etc., and is fitted up with potting table, drawers, shelves, and a writing desk. The boiler pit is partitioned off by itself, as shown in the plan. In the center of the house is a large bed, in which plants of various kinds

are plunged. The edge of this bed is sometimes, in winter, "garnished with Lettuce." The bed on the south side is used for forcing Lettuce, Tomatoes, Cu-

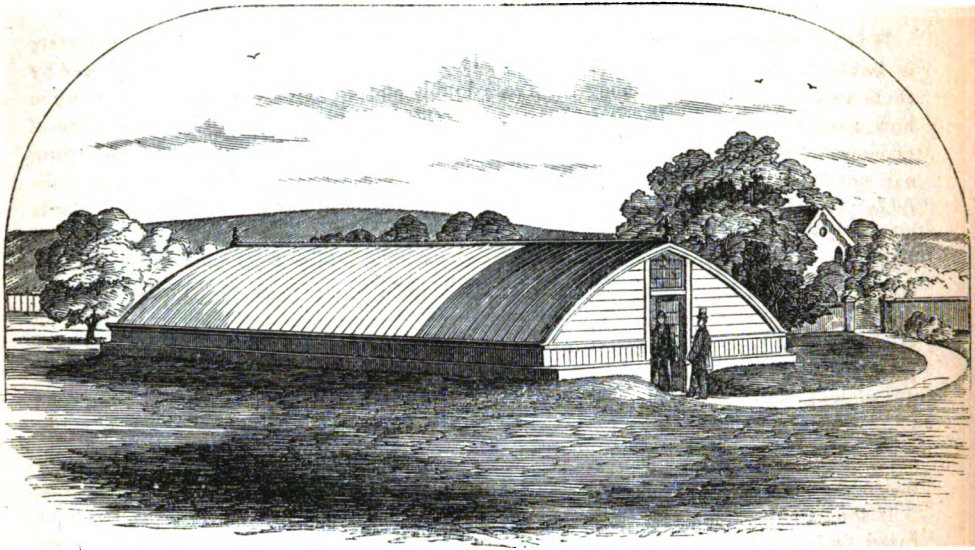


Fig. 1.—Perspective View.

cumbers, etc. That on the north side is used for propagating purposes. The bot-

arrangement works well, but involves an expense that may be avoided where two houses on different levels are not heated by the same boiler. *Fig. 3* gives a good

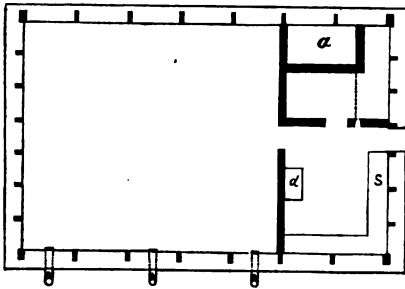


Fig. 2.—Ground Plan.

tom heat for these beds is supplied by brick tanks resting on piers, the water being heated by four inch iron pipes running through the tanks. In this case it was necessary to run the pipes through the tanks, because they are also used for heating a grapery near by, the floor of which is considerably higher than the tanks. The

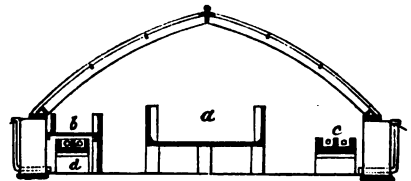


Fig. 3.—Section.

idea of the interior arrangements. In addition to the beds mentioned, there is considerable shelving at each end.

On the whole, the house is an excellent one, and, withal, handsome. The owner is so much pleased with it, that his only regret is, that it is not larger. Another just like it would be a handsome addition to his fine place.

FUNGI IN THE GREEN-HOUSE.

BY A. VEITCH, NEW HAVEN, CONN.

It is not the foliage of plants alone that is liable to the attacks of fungi, but the roots as well. And when it is remembered how necessary these organs are in the economy of vegetation, too much vigilance can not be exercised in protecting them from every influence, the tendency of which is to destroy, or even weaken their energies. The spawn of some of the larger fungi is capable of doing this, as many gardeners very well know. Indeed, were they to record all the mishaps resulting from such causes, within the limits of their experience, they would constitute quite a long chapter; the study of which, however, might be useful in teaching others how to avoid similar misfortunes.

It sometimes happens that the spawn of fungi finds its way into flower-pots along with the material used in potting. This is more likely to be the case when the rotted dung of old hot-beds is used, as it is often more or less pervaded with the mycelium of several species of *Coprinus*, and others nearly related. By way of showing how much mischief is sometimes done in this way, I may mention a circumstance which happened some eighteen months ago. It was that of a stock of Roses potted with this kind of material, the result of which was, several hundreds of them were injured beyond recovery before any danger was apprehended: an event not to be wondered at, as at potting time they were set into winter quarters to rest until spring.

The practical lesson to be derived from this and similar cases is, never to use material to pot with unless entirely free from all mouldiness; and it is not unlikely but that "virgin loam from an old pasture" and well rotted manure thoroughly wrought into a compost by frequent turnings, owes at least half its virtues to being free from the spawn of fungi and its deteriorating effects.

Plants in green-houses, especially those

standing upon pine wood shelves, in a state of decay, are in danger of being injured by fungi, which not unfrequently grow upon them. I refer more particularly to some of the members of a small group belonging to the tribe *Gasteromycetes*, technically called *Nidularia*, so called from the plants resembling little nests, or which "consist of leathery cups containing several lenticular bodies, supposed to contain sporules, and altogether resembling a bird's nest with eggs." *Nidularia campanulata* is common in green-houses, coming to perfection in autumn, and in favorable circumstances so abundant, that when mushroom-growers raise as good crops of their esculent, they can not feel otherwise than satisfied. But though autumn seems to be the only season in which this very interesting fungus fructifies, the spawn grows throughout the year, showing itself in white flakes on the surface of the boards, and developed with great rapidity under the flower-pots; owing to the constant supply of moisture it receives there, and to the absence of light. It is here the mischief is done; for if not attended to, it may find its way through the holes of the pots, and spread throughout the entire ball, destroying every root and fiber as it goes. I saw some valuable plants last season nearly destroyed in this way, and would have been entirely so had it not been arrested in its progress. The method employed to do this was to turn the plants out of the pots, and remove all the roots and every particle of earth the least affected; otherwise, I know of no way in which to save plants so circumstanced.

But, however annoying it may be on shelves, it is still more so in propagating beds, where they are "possessed," as in them its progress is more concealed, and its presence may not even be suspected until much mischief is done.

All danger from this enemy may be

avoided by frequently painting the shelves, or replacing them with new ones when in a state of decay. Sometimes, however, it may not be convenient to do either the one or the other. If so, it would be safe to sprinkle sulphur occasionally over the parts affected, as that mineral kills fungous growth wherever brought into contact with it.

[We would add to Mr. Veitch's very

interesting article, that quicklime added to the sulphur renders it more potent. A gardener should always be on the lookout for these enemies, and apply the remedy before much mischief is done; nay, even when there is reason to suspect their appearance; for the old adage, that "an ounce of prevention is better than a pound of cure," will apply here with great force.

—ED.]

COIT'S BEURRE AND TARQUIN PEARS.

BY THE EDITOR.

WE give portraits this month of two pears as dissimilar almost as two pears can be. The first is Coit's Beurré, a pear as yet but little grown, but of decided excellence, and destined, we think, to become quite popular. It has sustained its

goodness wherever we have seen it. It is a good grower, and bears well. The second is Tarquin, remarkable chiefly for the length of time it may be kept. It is simply a winter cooking pear of little merit, and perhaps not worth being figured.

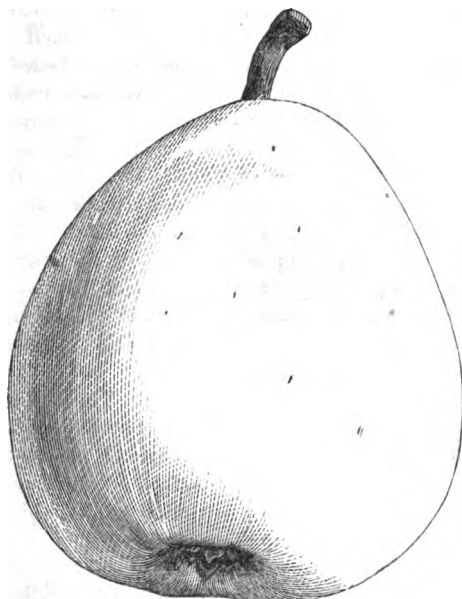


Fig. 1.—Coit's Beurré.

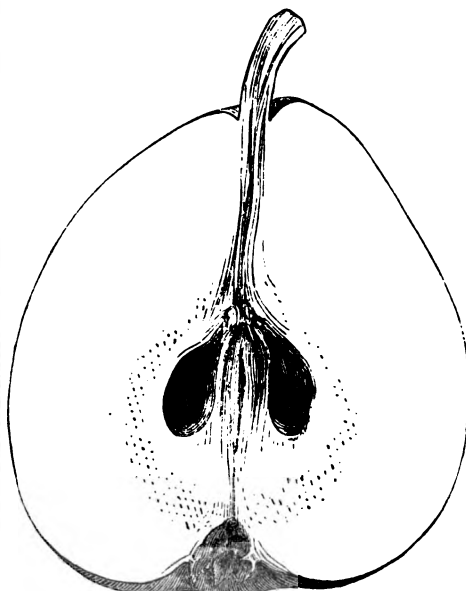


Fig. 2.—Section.

Coit's Beurre.—*Fruit*, medium, obovate, inclining to pyriform. *Skin*, yellow, deeply covered with russet, often with a beautiful crimson cheek. *Calyz*, large, open,

with narrow segments, in a broad, very shallow basin. *Stalk*, short and stout, inserted in a small fleshy cavity. *Flesh*, buttery, juicy, spicy, and vinous, but a little

gritty at the core. *Quality*, best. *Season*, September and October. It is an American Pear, having originated in Ohio. The following is Mr. Downing's description of Tarquin, our own being lost : " *Fruit* large, pyriform. *Stem*, long, stout,

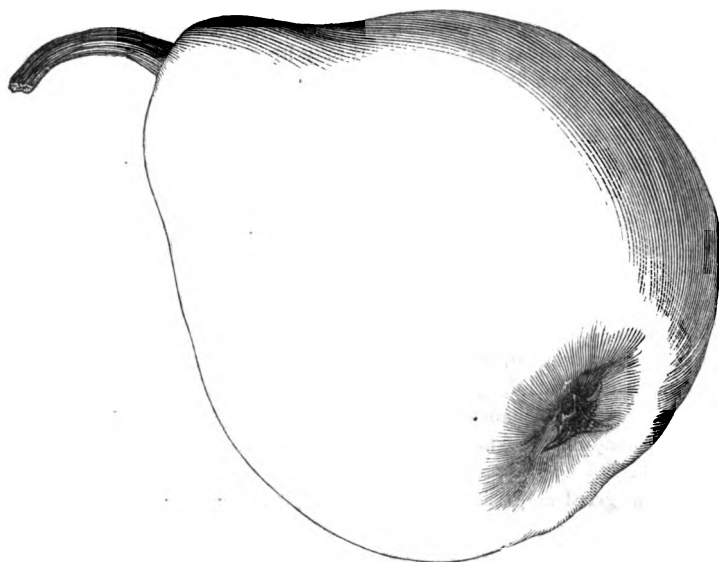


Fig. 3.—Tarquin.

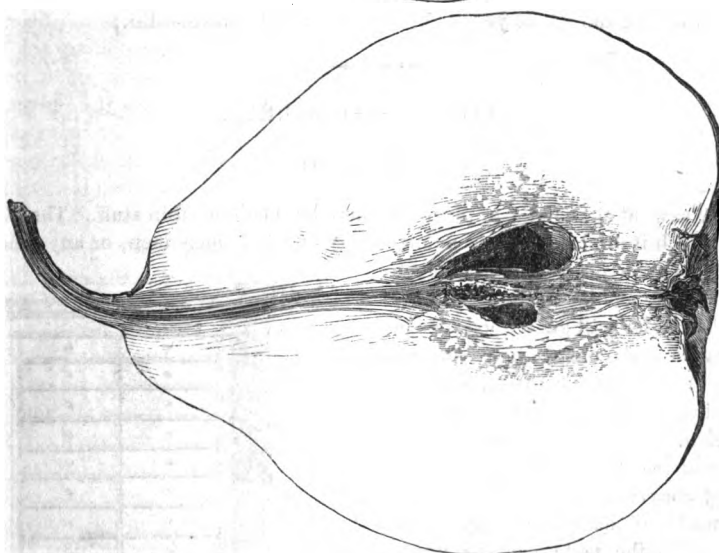


Fig. 4.—Section.

fleshy at junction, without cavity. *Calyx*, with russet, and thickly covered with large, open, with persistent segments, in a broad, irregular basin, surrounded by russet. *Skin*, green, sprinkled or patched very long keeper."

BLACK BARBAROSSA GRAPE.

BY E. FRYER, GARDENER TO HON. WM. H. STARR, NEW LONDON, CONN.

A VINE of this fine variety is growing in one of the graperies under my charge in this place. Last season it bore about twenty-eight pounds of fruit, bunches weighing from one and a half to four pounds each. Many of the bunches remained on the vine up to January last, and every berry was still plump and in good order. Two bunches remained till the second day of this month, (March.) A few berries were plump, but all the others were good raisins.

For late keeping, I presume, it is one of the best, if not *the* best variety yet introduced; for, with proper appliances, there is no difficulty in keeping the fruit in good order until March.

It should be a great acquisition to a commercial grower, and perhaps indispensable in a private place, where grapes are required during the whole year.

One thing in connection with this variety it may be well to mention; that it will not bear with close pruning; that is, it will not bear a full crop if pruned so close as vines generally are on the spur system. Double spurring, as recommended by Chorlton, is the method by which I have found it to produce a fair crop every year. With a house and border, the latter not over rich, exclusively to itself, I think it would be a profitable grape.

[The Barbarossa is undoubtedly valuable as a late keeping grape. It is also a profitable grape to grow for market. We are inclined to think, however, that the Lady Downe is quite as valuable in these respects, besides being a very much better grape. Has Mr. Fryer grown it? We should be glad to hear from any of our readers who have.—ED.]

AMATEUR'S SEED BUREAU.

BY THE EDITOR.

WE lately saw at a friend's a piece of furniture, which it seems to us is admirably adapted to the preservation of such seeds and bulbs as the amateur usually keeps. The reader will get a good idea of its appearance and construction from an examination of the accompanying figures, the first being a perspective view, and the second a plan. It is five feet high, three feet wide, and one foot deep, but may be made of any convenient size. The one we saw was made of mahogany; any other wood that suits the taste may be used. One made of pine, well oiled and rubbed bright with soft shavings, would not be out of place in the library or sitting-room.

The sides should be made of boards not less than an inch and a half thick, to make room for the bolt of the lock. The back

may be made of thin stuff. The drawers may be five inches deep, or any other con-



venient depth. The two narrow strips or flaps on each side, one of which is shown open, serve the purpose of securing the

drawers. On the flaps being closed and locked, all the drawers are secured against



being pulled out. In other words, by simply turning the key, half the drawers are locked. The position of the locks is shown, and the engravings exhibit the construction so clearly, that further detail is unnecessary.

This bureau, we think, is a French contrivance. It may be applied to a good many useful purposes, besides keeping seeds and bulbs, as well as be made an elegant piece of furniture, suitable for the parlor, the library, or the general sitting room. It would make, for instance, a very good fruit bureau, the drawers being made sufficiently deep to stand the fruit up. In a moderately warm room, Pears would ripen well in it.

WAYSIDE THOUGHTS UPON ARCHITECTURE.—V.

BY ARTIFICER.

The Architect.—We all, doubtless, understand, in a general way, that an architect is one who designs and superintends the erection of buildings, without being positive or clear in reference to any of the details of his profession. It is for this reason, principally, that I desire the indulgence of the reader in a brief review of some of his qualifications and duties.

A good many qualifications are necessary to make a thorough architect. Not only is he required to be conversant with the theory of his art, but equally so with all the practical methods.

"*Practice* is the constant and accustomed attention to the manual operations, and to the several kinds of materials of which a work may be constructed;" and *theory* is the ability to demonstrate and apply the *principles, and rules, and methods* of proportion, in the current language of the art.

To a complete and thorough education, embracing a knowledge of letters, that he may be enabled to make his thoughts, observations, and experience intelligible to others, should be added that moral and religious discipline which strengthens the character and fortifies the conscience, begetting a faithful and honorable discharge of duty and trust.

To convey his ideas and conceptions, for ornament or utility, to workmen, the architect should be accomplished and

skillful in drawing, so as to form the most perfect representation possible of that which he would execute. Arithmetic and mensuration are necessary to calculate the expense of a building, adjust measurements, and solve difficult problems of proportion or symmetry, and constructive laws relating to strength of materials.

Natural philosophy, for the resolution and composition of forces, adjustment of laws of sound, light, heat, and ventilation. Chemistry, for the composition of materials. Geology, for their quality and duration. Botany and history, for a proper selection and judicious use of style and ornament for all classes of buildings. The architect should also be familiar with the general principles of painting, music, and sculpture, as aids and elements in the composition of design. A practical knowledge of the law, so far as relates to rights and divisions of property, restrictions under which he is permitted to build, and the nature of *contracts, agreements, and awards*. The general principles of civil government should be known, to aid in designing for the requirements of civil building. Theology, for general church building. The architect should undoubtedly have a genius adapted to the calls of his profession, inventive skill, originality, taste, and something of the poet's fire should burn within him.

These are some of the qualifications necessary to constitute a good architect. His duties consist in the preparation of all *plans, designs*, working details, and specifications; the adjustment of all differences that may and sometimes do arise from a misapplication of specified requirements.

It is within his province to see that the materials used by the different artificers in the construction of an edifice, be of a good merchantable quality, and also that the workmen execute the work of their respective departments according to the plans given them.

We can conceive, from this brief review, how much diligence, attention, and study are required on the part of the student in architecture to excell in his profession.

One of the brightest examples afforded by history for the emulation of the student is that of Bonarrotti Michael Angelo, a distinguished architect, painter, and sculptor, born in the 15th century. His talents for designing were so great, that he is "figuratively said to have been *born a painter*." From the school of Ghirlandau, he went to that of Lorenzo de Medicis, where he remained until the death of his patron, when he removed to Bologna, where he executed an image of Cupid, a portion of which he buried at Rome, but which afterward came into the possession of Cardinal St. Gregory as an antique;

and it becoming known shortly after who produced it, the reputation of Bonarrotti as a sculptor became established. His skill and perseverance procured him the patronage successively of Julius II., Adrian VI., Clement VII., and Paul III., in whose reign he commenced painting the great work of the *Last Judgment* in the Sistine Chapel. But what commends him as a particular example to students of architecture, were his own efforts as an architect, his principal work in this capacity being the St. Peter's Church of Rome. An evidence of his rapidity and skill is given by a writer of the 16th century, who says: "I saw Michael Angelo, when 60 years of age, strike off more chips from a hard piece of marble in less than a quarter of an hour, than three young masons would have done in three or four hours. He struck with such fury and impetuosity, that I expected to see the work broken to pieces, taking off at a blow large pieces three or four inches thick, and so close to the mark that the slightest deviation must have spoiled the work."

[We are glad to see Artificer give so wide a range to the talents of the architect; and especially are we glad to see him give place to the moralities. It is in such a field alone, that a good name and permanent fame can be acquired.—Ed.]

PARK SPICE APPLE.

BY WILLIAM S. CARPENTER, NEW YORK.

THIS excellent apple originated on the farm formerly owned by Rodger Park, Town of Harrison, West Chester Co., N. Y. The original tree is now supposed to be over 100 years old. It is still vigorous, and bears very large crops of beautiful fruit. The tree stands alone in a pasture lot. The estimation in which this apple was held by the Park family, may be judged from the fact, that nearly all the grafted fruit on the farm is of this variety;

and what is most remarkable, grafts have never been disseminated; and, with but one exception, it can not now be found growing off of the original farm. The nearest neighbors do not seem to know that a most valuable apple is within their reach. We trust that scions will now be disseminated by the person who discovered it, about two years ago, and was induced to purchase the fruit for its fine quality and great beauty, and ship them to

England with a very fine lot of Newtown Pippins. The Park Spice brought the largest returns. *Fruit*, pretty large, slightly oblique, conic. *Skin*, shaded with red and striped with crimson on a yellow russet ground.

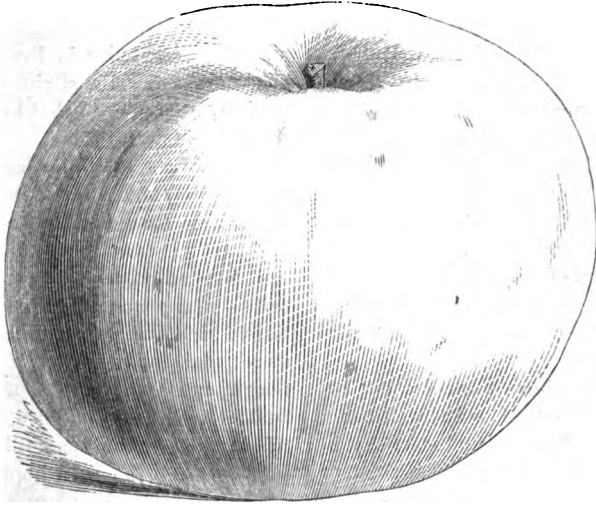


Fig. 1.—Park Spice.

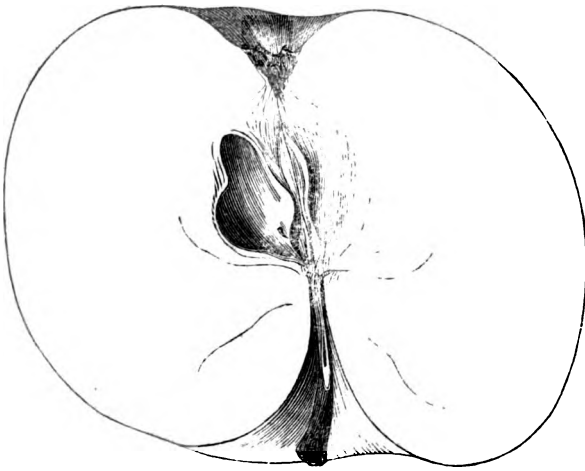


Fig. 2.—Section.

Flesh, yellowish white, fine grain, crisp, juicy, with a very pleasant spicy flavor. Season, January to May.

men from which our portrait was made, and are prepared to endorse Mr. Carpenter's estimate of its fine quality.—Ed.]

[We may add that we tested the speci-

REPORT ON GRAPES IN CENTRAL IOWA. LATITUDE 42°.

BY LUTHER DODD.

With the exception of a few Isabellas and Concords, all my vines are young, having been planted a year ago last spring. I have from one to four each of the following varieties: Diana, To-Kalon, York Madeira, Union Village, Allen's Hybrid, Elsingburgh, Hartford Prolific, Logan, Northern Muscadine, Rebecca, and Anna. They were planted on high prairie land, sloping a little to the north, in a village garden, but slightly protected by neighboring buildings.

The ground had been worked about two feet deep, and mixed with well-rotted stable manure. The vines all started well, and made a good growth the first summer, except the Anna. The Delawares grew to my entire satisfaction.

Early in November I pruned them back to the third bud of the new wood, and covered them with earth. When I uncovered them in the spring, I found the Union Village dead to near the ground. The new wood was all killed. Allen's Hybrid was dead, root and branch. Diana was killed back two buds. My other vines, of the above catalogue, were all alive to the last bud.

The winter was very severe on small fruit. Changes were frequent and violent from quite warm to intense cold. Isabella and Catawba vines, though covered, were killed, in my own and neighbor's garden. The hardiness of the different varieties was tested, and the fact that we have vines hardy enough to endure our most severe winters demonstrated. Though not the coldest, last winter was the most severe on vines and small fruit, of any

since my residence in Iowa commenced, six years ago. By slight winter protection, I am convinced that hardy vines will do well in Central Iowa.

Of my vines, the following bore fruit the past season, and ripened in the order and at the time named: Hartford Prolific, ripe Sept. 1st; Delaware, ripe Sept. 10; Northern Muscadine, ripe Sept. 15; Concord, (vines four years old,) ripe Sept. 3; To-Kalon, ripe Oct. 1st; Diana, ripe Oct. 10; sweet and good. York Madeira, Elsingburgh, and Anna, all failed to ripen any fruit. A vine of each bore a few bunches, which hung on the vines till severe freezing destroyed them. I hope that they will do better when the vines acquire a little more age. None of my vines have yet been affected by mildew or wilting of the grapes.

The Diana has grown the most rapidly and yielded the most fruit. The Delaware is certainly the best, and Diana the next. To-Kalon is simply good. Hartford Prolific, Northern Muscadine, and Concord I class together, and call them all poor. I extended my variety last spring, and expect to add to it next; and hope to be able, if life is spared and Providence favors, to make a more interesting report in another year.

[We have no doubt that we have grapes that will ripen uniformly in Central Iowa, and those living there will read your report with interest. We must have grapes for the whole country. We shall be glad to hear from you again.—Ed.]

SEMPERVIVUM ARACHNOIDEUM.

BY THE EDITOR.

MANY years ago we were a good deal delighted in being the owner of a plant of the *Sempervivum arachnoideum*, then, and even now, a rare plant; for a specimen is very



seldom seen, even in the best collections. Some time since we saw a picture of it in the *Revue Horticole*, and had it copied, with the intention of placing it before our readers, which we now do. It belongs to the Houseleek family, of which it may be con-

sidered a very delicate representative. It is a very interesting rather than a beautiful plant, though it is not destitute of the latter element. Its specific name, *cob-webbed*, indicates its appearance very clearly; for it looks as if a spider had run all over it, leaving its web at every point of contact. This is very well shown in the engraving.

The plant is not difficult to grow, but is

very impatient of water. Put it in a light, open, sandy soil, with plenty of charcoal drainage, and water sparingly, especially when the plant is dormant, or it will rot off. If this should happen, lay the plant, or the small ones that grow at the sides, on a shelf to dry a little, and then pot again in sandy soil. It is, withal, such an interesting and curious plant, that a little trouble in its culture will be well repaid.

INCREASE OF THE PLANT TRADE OF NEW YORK.

BY H.

MESSES. EDITORS—I have been engaged in the plant trade in the vicinity of New York for the past sixteen years, and can speak from observation during that time of its immense increase. Nothing can better indicate the extension of floricultural taste, which in this case is certainly far in advance of the population. Sixteen years ago, those engaged in the trade might have been numbered by dozens; now they may be numbered by hundreds.

But to give your readers an idea of the present magnitude of the business, a table of figures will best explain; of course, it is not given as strictly correct, but as an approximation, which, on consulting with some of the largest growers, is believed to be rather under than over the mark:

150,000 Roses in pots, average of 30c. each.....	\$45,000
300,000 Verbenas in pots, average of 6c. each.....	18,000
100,000 Fuchsias in pots, average of 20c. each.....	20,000
30,000 Dahlias in pots, average of 25c. each.....	7,500
10,000 Salvias in pots, average of 15c. each.....	1,500
25,000 Pelargoniums in pots, average of 25c. each.....	6,250
20,000 Scarlet Geraniums, average of 15c. each.....	3,000
25,000 Monthly Carnations, average of 25c. each.....	6,250

50,000 Heliotropes, average of 10c. each.....	5,000
20,000 Lemon Verbenas, average of 25c. each.....	5,000
50,000 Petunias, average of 10c. each.....	5,000
100,000 Tuberoses, average of 8c. each.....	8,000
50,000 Gladiolus, average of 25c. each.....	7,500
10,000 Phloxes, average of 15c. each.....	1,500
20,000 Chrysanthemums, average of 15c. each.....	3,000
300,000 Miscellaneous Bedding Plants, average of 15c. each...	45,000
	<u>\$187,500</u>

The sales of some of the largest growers now amount to upwards of \$10,000 annually; yet some of these men, who, on beginning business, carried the products of their green-house in baskets, or trundled them in wheelbarrows or handcarts to market, now employ two or three teams daily in getting their goods to the dépôt of sale.

I may add, that now plants are much better grown, and that though prices may be lower than what they were a dozen years ago, yet the large quantities sold, and the better modes in use for propagating and growing plants, make the business to the producer more profitable than then.

[These statistics are very interesting.

If we add to the above figures the large sum realized from the sale of cut flowers, bouquets, baskets, &c., we shall have a sum total not far from \$300,000, which is probably below the mark. This, be it remembered, is for the city of New York alone.

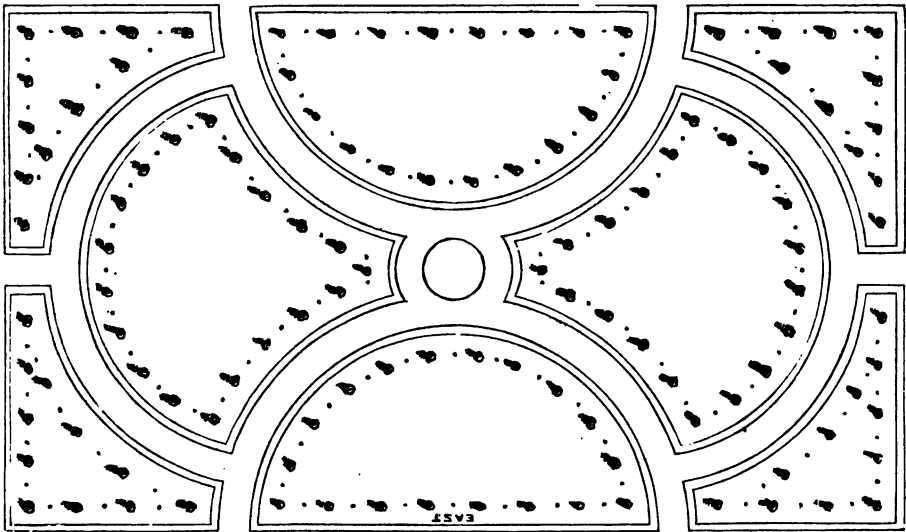
It would be interesting to hear from other large cities, in order to get an approximation of the flower trade of the whole country. Can any of our readers furnish the figures?—ED.]

AN ORNAMENTAL FRUIT GARDEN.

BY THE EDITOR.

In a former article we announced a purpose to give occasionally a garden plan, and we accordingly present a plan for an ornamental fruit garden. It was designed

for D. D. Chamberlain, Esq., of Croton Falls. It is intended chiefly for fruits. The location being a conspicuous one, less regard has been paid to straight lines than



would have been done for a vegetable garden, or one in which vegetables formed the chief object. In some places, the plan would be a very pretty one for a flower garden. Dwarf Pears and Dwarf Apples will be planted four feet from the edge around all the beds. Between these will be placed Currants and Gooseberries; and Strawberries, in addition to the last, will be so planted as to leave a square in each of the large beds for vegetables. In the center

of the garden there will be a rustic tool house, and under this a cistern, into which all the drain pipes will enter, with a suitable overflow. The garden is located conveniently near the barn-yard. It is intended that every thing about this garden shall be kept neat and clean. We think the plan will form a pretty feature in Mr. Chamberlain's extensive and beautiful grounds.

WHAT IS UNSETTLED, AND WHAT IS SETTLED, IN THE CULTURE OF THE GRAPE VINE?

BY HORTICOLA.

Quantum est quod nescimus.—PLIN.

How much there is that we do not know! Thousands of years have been rolling into the interminable ocean of eternity; Aristotle and Copernicus, Kepler and Newton, and Leibnitz, Linné, Lavosier, and almost innumerable other great men, have left their marks on the path to the halls of science; great discoveries have been made, greater will be made in the progress of the ages; yet we must meekly exclaim with Pliny: "How much there is that we do not know!" Every step which brings us nearer to the unfolding of the unchangeable laws of nature, doubles the distance, and we, like that ancient philosopher who, having been asked about God, doubled the days for investigation each time he was required to make known the result, we shall have to double, not days or years, but ages, and after the expiration of them, we shall be compelled to say: "How much there is that we do not know!" What we know is only what lies on the surface; we know *laws*, but we do not know *forces*. If we compare our progress with that made by the Egyptians, Greeks, and Romans, it is gigantic; but if we compare what we have attained and accomplished with that which remains to be attained and accomplished, it sinks into insignificance, and almost disappears from the view like a distant point when we recede from it.

The grape vine has been in cultivation for thousands of years; it has been subjected to the closest observation, much more so than any other plant or tree; experiments with it have been made, varied, and repeated under circumstances widely different from each other, in hot, temperate, and even cold climates, in the open air, and under glass; yet we have almost despairingly to exclaim: "How much there

is that we do not know!" We shall attempt to show, in the following, what is unsettled as yet in the culture of the grape vine, and what is settled.

WHAT IS UNSETTLED.

I. PLANTING.—When we are about to plant a grape vine, and we consult books concerning the best season for it, we meet at the very threshold of grape culture with an *unsettled* point. While some of the best authors recommend the fall as the very best season, others, equally good, prefer the spring. Dr. *Grant*, f. i., is very much in favor of the fall; *Rubens*, whose book on the vine has been incorporated by *Haraszthy* in his extensive work, says that the latter part of April or the beginning of May is best for planting.

The same uncertainty prevails in regard to the proper *depth* necessary to insure success. Some authors think that a depth of *eighteen* inches is not too much; others think that *eight* to *ten* inches are sufficient.

II. SOIL.—On the authority of *Allen*, the soil for grape vines was most copiously enriched to a great depth by burying in it the carcasses of dead horses and other animals, and by mixing with it an abundance of bones, stable manure, etc. This practice has been called, by *Hovey* and others, *quackery*, which would have the inevitable effect of destroying the vines in a short time. Recently sods from an old pasture, cut from three to four inches deep, some muck, sand, lime rubbish, and the like, have been pronounced to be the best mixture for the border. The same difference of opinion is found in Europe; there, however, as well as in this country, there is a strong inclination visible towards only moderately rich borders.

III. LAYERING.—The practice of layering,

for several successive years, a foot or eighteen inches of the previous year's cane, in order to obtain roots in greater number, extending over a long piece of the stem, has had its origin in France. Especially at *Thomery* it is resorted to as a rule, in order to obtain bunches and berries of large size. Dr. Grant has made it known here, desiring to layer each vine for a length of about ten or twelve feet.

The Editor of the *HORTICULTURIST*, who has, by his "Hints," benefited the whole grape-growing fraternity so much that enough praise can not be bestowed upon him, differs from Dr. Grant on this point. A very intelligent vine-grower declared not long ago in our hearing, that he repented having layered his vines; for, instead of gaining, he had lost considerable time.

Dr. Jules Guyot, in his book, *Culture de la Vigne et Vinification*, 3d edition, Paris, 1861, on page 24, admits that layering is useful and almost indispensable for table grapes, but condemns it for vineyards, except, as he expresses it, "tous l'empire d'une absolue nécessité pour le raisin de la vigne." That necessity arises, according to page 23, from the paucity and shallowness of the soil. In another place he asserts that layering is detrimental to the aroma.

IV. PRUNING.—Even the ancients practiced the *pruning of the roots*, to a certain extent. The Romans called it *ablaqueatio*. According to them, the best time is the middle of October. It consisted in removing the soil from around the stem to the depth of about six inches, at a distance of eighteen inches from it, at which the *surface roots are to be cut off*. This root-pruning must not be omitted for the first five years; afterwards it may be dispensed with every third year. For the curious, I give here the references: Pallad., xi., 5; Colum., iv., 8; Colum., iv., 24; Geop., v., 19; Plin., xviii., 75.

Wherever you travel in the vine countries of Europe, you find this pruning of the surface roots, if not universal, at

least very common; but as practiced there, it takes place in the *spring*, which season the ancients thought unfit for it.

Even in Greece it is common. Mr. *Rivers* refers, in his well-known little book on *Orchard Houses*, on p. 158, ninth edition, to the letter from an American friend, then traveling, by the order of the government, in Europe. That friend says there that it interested him much, while in Zante and Cephalonia, that the people removed the soil from the vines from nine to twelve inches in depth, and cut off all the roots within six inches of the surface close to the stem. The friend adds, that, by imitating the Greeks also in manuring the replaced soil, he could save \$500 an acre in the formation of his vineyard.

The pruning of the surface roots is strongly recommended by some skillful cultivators in this country; f. i., by Mr. Wm. Saunders, who keeps the first set of roots six inches below the surface, so that the soil above it serves as a mulch. Some, however, condemn it altogether, among the number of whom are Mr. *Bright*, in Philadelphia, and Dr. Grant, if I understand a remark of his on the functions of the surface roots right.

Some approve of a course intermediate between the two extremes. So Rubens, who recommends it for light sandy soils, disapproving of it in soil with a hard subsoil, or which is retentive of water.

In regard to the *pruning of the canes*, the first unsettled point we meet with is *the time*. Many prefer the fall, some even the very early fall, for performing that operation; others continue it through the winter, but wish it to be finished in February, in order to avoid the *bleeding of the vine*.

Kecht, in his celebrated work, (*Practischer Weinbau*), page 39, says, that after pruning in late spring, a vine loses in twenty-four hours by bleeding two pounds of sap; the following day just as much. Sometimes the bleeding does not cease in two or three weeks. Now, as about five pounds of grapes yield two pounds of grape juice, it is clear that an enormous

quantity of wine is lost every year by spring pruning; *f. i.*, in Wurtemberg, where the vineyards occupy 82,900 acres.

Dr. Jules Guyot, on the contrary, wishes to have the pruning deferred to the middle of March or the middle of April. On page 37, he prefers even the period from the 15th to the 30th of May; "for," he says, "it is then easy to choose the quantity of bunches to be left according to the strength of the vine." He continues:

"The water which flows out abundantly after spring pruning is not the *sap*; it is a little stream, from which each branch takes what it needs, the *elements* of the *sap*. The bleeding of a vine shows simply that the irrigating organs work, and that they work well."

To form a *head* by pruning repeatedly low, is considered of vital importance by the majority of the German writers on the vine. C. Reemlin, the *Vine Dresser's Manual*, New York, Saxton, p. 43, says, "the formation and preservation of which—the head—is a matter of great moment." Rubens, p. 50, compares the head with the stomach in the body of the higher animals, which serves to elaborate the juice for nutrition. "The thicker, therefore, and healthier the head is," says Rubens, "the better is the grape vine."

Other writers, *f. i.*, the French generally, do not even mention the head, showing thereby that they do not attach any importance to it.

Still, is *pruning at all necessary or useful*? Although nearly all the writers on the culture of the vine seem to agree on this point, yet we find a great many people who think pruning barbarous, wrong, the source of disappointment, disease, and loss. They point at our wild growing vines, which always ripen their crops; they remind us of the grape vines in Italy, trained to trees, which yield, without pruning, an abundance of most delicious grapes; they tell us of Isabellas and Catawbas, rambling unrestrained over fences and the roofs of houses, bearing and ripening their fruit annually.

V. PINCHING.—So far as pinching consists in removing the top of a fruit-bearing shoot several joints of leaves above the uppermost bunch, there appears to be no difference of opinion among the writers; but pinching the laterals of shoots intended for bearing canes the following year, is considered absolutely necessary by some, and radically wrong and pernicious by others.

Dr. Grant, the Editor of the *HORTICULTURIST*, and a host of others, look upon pinching the laterals from the beginning as indispensable. On the other hand, *Kecht*, and his follower *Meyer*, in his work, *Der Weinstock*, (the Grape Vine,) Erlangen, 1861, protests against the pinching of the laterals of the cane intended for fruiting the next year. *Kecht* does not wish to do any thing to the young vine until it reaches the bearing age, except to cut it down to one or two buds every year. Also *Rubens* advises to let the laterals grow until they become too long. They are then to be shortened in a little. This has to take place in August.

Kecht and *Rubens* assert that the buds of the base of the laterals grow much more plump by not pinching the laterals than by pinching.

Kecht and others think topping the vines towards the close of August or the beginning of September injurious to the vine.

VI. TRAINING.—It would be impossible to explain here the multitude of systems according to which the vine either has been or is actually trained. We understand here by training those two general systems adopted for managing it, *viz.*, the so-called *renewal* and the *spur* system.

It is unnecessary to remind our readers of the fact that a few years ago all was *renewal*. The cane which had borne was cut out to give place to a new one carefully trained the year before. This is the system pursued by the Germans in Ohio, as well as by a great many of them in their own country. It is extensively practiced in France; it is the system of *Dr. J. Guyot*; it is the system which A. J. Downing prefers.

Dr. Grant, on the contrary, declares that the highest flavored fruit grows always near an old stump; he advises, therefore, to change *Dr. Guyot's* peculiar mode of training, so as to apply to it the spur system. The spur system is generally the system adopted in vineries.

VII. COVERING.—In this country, covering the grape vines in the late fall is thought to be indispensable for all varieties, even those that are perfectly hardy. A great many articles have appeared in the Horticultural Journals to prove not only the necessity, but also the utility of covering.

In Germany, covering is thought to be a necessary evil, not to be resorted to except in localities subject to late spring frosts. *Rubens* says, (p. 261,) that it is much better not to cover the vines in a country where the winters are not excessively cold. He adds that vines which have been covered, are much more tender than such as have not been covered.

VIII. MANURING.—The best European writers on the management of grape vines in vineyards and gardens, caution against over manuring. While *Guyot* thinks very little of compost, *Dubreuil* recommends it, especially for soils of a certain kind. In this country, stable manure is, in the fall, spread on the surface, and dug under or removed in the spring. *Guyot* and *Dubreuil* say it must be dug under in the fall between the rows. Some ascribe to the use of stable manure a bad effect upon the taste and aroma of the grape juice; but it is denied by *Guyot* and *Dubreuil*. The latter discusses this question in his work, *La Culture du Vignoble perfectionnée*, and says the only effect of manuring is the greater vigor with which the vines grow; consequently their product will be more watery.

Dr. Grant affirms that liquid manure causes an unhealthy growth. *Rubens* calls it beneficial, if moderately and judiciously

used, and gives recipes for preparing it. *Meyer* is of the same opinion. He, besides, insists upon cutting up all the wood after pruning, in order to bury it among the vines. This advice is undoubtedly one of the very best that can be given.

Having gone over the whole ground, and having found so many points unsettled, we turn now our attention to

WHAT IS SETTLED IN THE CULTURE OF THE GRAPE VINE.

All agree that the grape vine is,

1. *A useful Plant*.—It serves for making arbors and producing shade on verandas, etc. Grapes are delicious to eat, and conducive to health. When dried they make raisins; their juice makes wine, from which, by fermentation and distillation, alcohol is obtained, and through it vinegar.

2. *A beautiful Plant*.—The elegance and abundance of its leaves, its climbing habit, the fragrance of its blossoms, the color and shape of its clusters, place the grape vine among the most beautiful plants in existence.

3. *A patient Plant*.—It may be propagated by seeds, cuttings of one or more eyes, of old or young green wood, by grafting, budding, or inarching; it may be treated right or wrong, or may be left to itself; it is a long-lived plant, and will yield its fruit abundantly every year.

It is high time for us to conclude this article. We do it in shaking hands with our readers, and whispering into their ears, or, according to circumstances, exclaiming aloud:

Quantum est quod nescimus!

[Thank you, Horticola, for this most interesting and learned resumé of the unsettled and settled points of grape culture. We feel strongly tempted to follow in your steps, but prefer to leave to you the ground that you have occupied better than we can.—Ed.]

A TALK ABOUT VASES, GARDENS, ETC.

BY W., WASHINGTON HEIGHTS, N. Y.

THE few remarks I shall make are not intended for professional gardeners or experienced amateurs, but rather for that large class who have gardené, but who can not afford to keep a gardener, merely keeping a "man of all work," who does not profess to know any thing about flower gardening. The lady of the house also, upon whom the responsibility of this branch of the garden generally devolves, is in the same fix as Patrick, *i. e.*, knows very little about it.

Vases, when properly filled, properly placed, and well taken care of, are useful and ornamental. Useful, in spots near and under trees, where it is desirable to have a bed of flowers, but where flowers will not grow in consequence not of the shade so much as the absorption of the moisture by the roots of the trees in the summer months, which leaves the ground as dry as powder. In such a spot a vase or vases may be placed, and, being partially shaded, will not require so much labor in watering, and will keep in bloom a long time.

A moderate sized vase, if not too densely shaded, may be filled thus: A good shaped plant of *Souvenir de Chiswick* or *Sir Colin Campbell Fuchsia* in the center, edged round with three plants of variegated *Sweet Alyssum* and three of *Lobelia speciosa*.

If the location is more exposed to the sun and wind, put a *Tom Thumb* or *Punch Geranium* in the center, with the broad-leaved *Periwinkle*, both the plain and variegated variety, on the outside, with the *Ivy-leaved Geranium*. A vase filled with the new blothed *Petunias* also looks well. Another elegant and graceful plant for a vase is *Russelia juncea*. Be sure there are holes in the bottom to let the superfluous water out; and be sure also to put stones or oyster shells over the holes to prevent them being choked with the soil.

Two thirds good loam, the other third fine decayed manure and sand, will be a suitable compost.

In planting circular or oval beds, it is often difficult to find suitable plants for the center. A vase, in some cases, answers the purpose very well; a good standard monthly *Rose*, a *Fuchsia Corallinna*, also will do, if it is a strong plant. For a large figure on a lawn, a *Norway Spruce* looks well, till it gets too large; the bed may then be turfed over. A circular bed, say 12 or 14 feet in diameter, on a lawn, planted thus, would be showy and effective. A good shaped *Norway Spruce*, 7 or 8 feet high, in the center; next to this round, 18 inches apart, some of the new *French Gladiolus*; next to this alternate the dark leaf *Coleus Verschaffeltii* with variegated *Geranium*, or *Cineraria maritima*, (*Powdered bean*), or the new *Centaurea candidissima*, with one or two plants of *Ageratum Mexicanum*. Finish the outside with *Phlox Drummondii*, variegated *Sweet Alyssum*, *Verbenas*, and *Gaillardia picta*.

Attempts are sometimes made to copy the English flower-garden style, in having each kind of plant in separate beds; but in this climate it is, and will be, a failure in nine cases out of ten, unless in the hands of an intelligent and experienced gardener, who understands what plants to use, the harmony and contrast of colors, etc., with plenty of green-house room to grow his plants in. Of course, a person of moderate means may have a bed of *Petunias* and a bed of *Vebeas*, etc., but not sufficient to give the shadow of effect they produce there with their thousands of plants of scarlet *Geraniums*, yellow *Calceolarias*, and blue *Lobelias*. Such plants, in our arid climate, are perfectly worthless.

Plainly speaking, too many people make a wilderness where they intend, no doubt, to make a paradise. The picture of the

wilderness I mean is this : Perhaps there are ten or a dozen beds around the house and on the lawn with nothing in them. About the first fine day in May, the lady espies her neighbor over the fence at work "making garden." Well, she must do the same ; so off she goes to the market or the florist, and purchases a lot of plants in full bloom. They *must* be in bloom, or she will not have them. Some of them may be good plants for summer blooming, and some may be worthless for such a purpose. By the time they arrive home it is likely they are as dry as dust ; but they are turned out of the pots into the beds, dry as they are, and left to take care of themselves. But there is not half enough to fill the bed, and she does not feel able or willing to buy any more plants ; and, as seeds are cheaper, the seed store is patronized, and annuals purchased to fill up the blanks. These are sown, some too deep and some too shallow ; and perhaps the contents of some of the papers all in one heap. Perhaps not more than half of them come up ; then the poor seedsman is blamed for selling worthless seeds.

Let a person visit such a place about the 1st of July. He will probably find the grass around the house a foot high, weeds in the walks, and the beds full of weeds, and half-starved, scraggy, bloomless plants, some not tied up at all, and those that are perhaps tied to small bean poles with pieces of old rags, instead of twine or matting.

Now this, I am sorry to say, is not an exaggerated or overdrawn picture. There are plenty of such places to be found in the country every year.

Now it was not intended, I know, by the occupants of these places, in the spring, that their garden should run riot in this way, and assume such a desolate aspect ; but so it is. But as no beneficial results emanate from condemning and pointing out the errors of others, unless we are prepared and willing to suggest or substitute something better, I will endeavor to give a few hints, which possibly

may be of some little service to beginners. In the first place, I would say, *do not attempt too much* ; what you undertake to do, do it *intelligently* and *thoroughly*. If your means will not permit you to employ a competent person to attend it, or you are not willing or able to work yourself, why, do not waste your money in making half a score of flower-beds, and half a mile of paths to be kept clean ; but purchase a few good flowering shrubs and evergreens, and have them judiciously placed around the house and on the lawn, and keep the grass closely cut, the edges of the walks neatly trimmed, and kept free of weeds. Such a place always looks respectable and inviting, even without a bed of flowers to be seen. By no means would I propose to banish the flowers ; but have no more than what you are willing and able to take care of ; they will not take care of themselves.

A family of well-bred, well-trained, and well-educated children are a source of pride and pleasure to their parents, and also to their friends ; it is so with a well-planted and well-kept flower garden. The amount and degree of pleasure derived in both cases, depend upon the care and attention bestowed on them.

It is surprising what satisfactory results can be obtained with a very small outlay of money, when judiciously expended and applied. I know places where the occupants of a small place have expended \$100 in the season for plants, labor, etc. ; another party in the same place would not spend \$50, and yet the place would be more attractive in every way. The effect produced in a flower garden depends very much on the way the plants are arranged as regards height, color, etc. For instance : take a circular bed that will hold 50 plants, suitable plants for show in summer ; give these to a novice in gardening to plant ; then duplicate them, and put them in the hands of an experienced gardener of good taste to plant in another bed of the same size, and the contrast and results will astonish you.

For the benefit of those whose inexperience does not qualify them to select for themselves, I will give a list of a few good standard varieties of plants from different classes or sections :

12 DAHLIAS.—Belle de St. Lawrence, Baron Alderson, Cossack, Roi de Pontille, Summit of Perfection, Vesta, Triumph de Pecq, Triumph de Roubaix, La Phare, Yellow Beauty, Duchess of Cambridge, Mrs. Edwards.

12 HARDY HERBACEOUS PLANTS.—*Aconitum versicolor*, *Achillea ptarmica*, *Anchusa Italica*, *Campanula carpatica*, *Chelone barbata*, *Clematis erecta*, *Delphinium formosum*, *Dicentra spectabilis*, *Eurotia fruticosa*, *Iberis sempervirens*, *Phlox subulata*, *Phlox Madame Rendatien*.

12 FRENCH GLADIOLUS.—Comte de Morony, Premices de Mont Rouge, Ophir, Neptune, Madame Souchet, Brencleyensis,

Clemens, Imperatrice, Vulcain, Victor Verdier, Le Puisseon, Napoleon.

12 ANNUALS.—*Phlox Drummondii*, Candytuft, Mignonnette, *Zinnia elegans*, *Hunemannia*, *Callirhoe*, China Aster, Japan Pink, Globe Amaranthus, Sweet Alyssum, Balsam, *Malope grandiflora*.

12 HARDY SHRUBS.—*Althea frutex*, *Chionanthus Virginica*, *Calycanthus floridus*, *Deutzia gracilis*, *D. scabra*, *Forsythia viridissima*, *Rhus cotinus*, *Pyrus Japonica*, *Spiræa prunifolia*, *S. Reevesiana*, *S. callosa*, *Weigela rosea*.

Of course, Verbenas, Petunias, Chrysanthemums, etc., must not be forgotten.

[Very timely and acceptable. There is a large class of amateurs who need just such advice and information as this, and they will all thank you. At this season of the year we always wish that the magazine were twice as large as it is, that we might have more room for such articles.—[Ed.]

WHAT IT COSTS TO PLANT A VINEYARD.

BY CHARLES REESE.

As there appears to be a pretty general desire among novices in vine-culture, to get at the cost of planting and bringing into full bearing an acre of this delicious fruit, I propose, at the risk of being considered "intensely practical," to give my story in a plain way, adapted to the comprehension of any one who knows a vine from a fig tree.

It has often been a matter of astonishment how much ignorance pervades the community upon this and other subjects, when they might be so easily enlightened, if they would take the trouble to write half a dozen letters.

The nurserymen all over the country advertise their "priced catalogues," with handsome illustrations and accurate descriptions of many hundred varieties of fine fruits, for the low price of one or two postage stamps; and yet many intelligent amateur farmers will go to an auction and

pay seventy-five cents or a dollar for a tiny, sickly-looking, one year old Delaware vine, and forty, fifty, or sixty cents a vine for Catawbas. Of course they are appalled when they calculate the cost of an acre at those prices. A little trouble will show them where to purchase fine healthy vines of the former for sixteen cents apiece, as I did last summer, and the latter for fifteen dollars a thousand, or one and a half cents apiece. And so on through the whole list of horticultural treasures, from luscious Bartletts and Beurrés, and Crawford's Early and Early Yorks, down to the splendid Triomphe de Gand, and Russell and Wilson's Albany.

I have made it a point, for several years, to send for a dozen or so of these counselors every season; and as soon as they have taken their seats around my table, I ask each in turn what he has to say this year. By noting carefully their replies, it

is surprising what a fund of valuable information may be gained. As the result of my consultations for three years, I have forty thousand horticultural pets, embracing nearly all the finest fruits in America, excepting, of course, the tropical, and not a single worthless variety in my orchard.

The arrangement is such that not a foot of ground is lost, and yet each plant has all the space it needs for the present. When they require more room, they can very easily have it.

Well, now, the first question with some is, what has all this cost? imagining, of course, the amount to be ten times greater than it really was. That is just the question I now propose to answer. If I am too high, I am very sure my catalogue friends will put me all right quickly. One hundred Delaware vines will cost twenty dollars. In three years, at an expenditure of about the same amount annually, for raising the cuttings, you may have several thousand.

One thousand strawberry plants will cost from five to ten dollars. In twelve months you will have twenty thousand plants. With Raspberries, Currants, Gooseberries, &c., it is somewhat similar. By planting what you must cut off to promote the healthful growth of the plant, your stock will increase prodigiously. Dwarf Pears will cost from twenty to fifty dollars per hundred. Peaches from eight to ten. Apples, Plums, and Cherries, from ten to twenty, etc.

The cost of planting an acre depends very much, of course, upon the condition of the soil. In my case, not the slightest preparation was necessary, beyond a thorough subsoil plowing, a complete overturning of the sod, and such a disintegration of the subsoil to the depth of 20 inches, as it had not known since it came from the hand of the Creator. This was done by a neighbor with two powerful teams, at a cost of five dollars per acre. It then took two men fourteen days to harrow, lay out, and plant an acre, say about seven hundred vines, eight feet apart each way. The bone dust, half a peck to each vine,

cost about twenty dollars per acre; so that the cost of planting an acre of Catawbas, including the vines, at the prices mentioned in the catalogues, (I raised all of my vines from cuttings,) was less than sixty dollars. The second year after planting we placed a chestnut post on the north side of each vine, at a cost of sixteen dollars a hundred, or about one hundred and twenty dollars an acre. We have for two years taken a crop of mangolds, beets, and carrots, from the land between the vines, which has fully paid the cost of weeding, cultivating, &c. *The entire cost of the vineyard, from the planting to the first full bearing, has been less than two hundred dollars per acre.*

Now let us look for the return. A few of our vines bore last fall. Nearly all will bear handsomely this year. An acre has been known to produce forty thousand pounds of grapes. This, at five cents a pound, would very handsomely pay for vines, cultivation, chestnut posts, interest on land, and state, government, and income tax and all, the way I look at it. And who would not have grapes every day for dessert at five cents a pound? I will venture the assertion, the day is not very far distant when they will be cheaper than apples, and every poor man in the land may have them for dinner whenever he wishes them.

I have had the fever for about ten years. Commenced in a small way in town, and have watched with much interest the gradual extension of the malady. Now that I am fairly in for it in the country, I shall, as soon as I have any thing very decided in the way of results to communicate, let you hear from me again; that is, if you would like to.

I hope to have something very interesting to relate about strawberries this summer; also, something on the old question, "Does it pay to plant Dwarf Pears?"

[By all means let us hear from you again, not only about grapes, but also strawberries and pears. Your figures in

regard to the cost of planting a vineyard will interest a large number of our readers. They might all be doubled, and still leave a handsome margin for profit. The expense of preparation will, of course, vary in different localities; but that ordinary plow land can be subsoiled twenty inches deep at a cost of five or six dollars an acre, we know very well, having repeatedly kept an exact account of it.

Double this sum, however, should not be considered dear. Where draining becomes necessary, this must also be added to the cost of the vineyard. While we insist upon thorough preparation of the soil and the purchase of good vines, we are still of opinion that a great many are needlessly frightened at the cost of preparing an acre of vineyard.—Ed.]

NEW OR RARE PLANTS, &c.

We glean the following from our foreign files and other sources:

FORRESTIA HISPIDA, (Hairy-sheathed Forrestia.)—*Nat. ord.*, Commelinaceæ. *Linn.*, Hexandria Monogynia. Native of Malay Archipelago and Northeastern India. Beautiful from the purple color which pervades the whole plant.—(*Botanical Magazine*, t. 5425.)

IPOMEA FILICOIDES, (Slender-stalked Ipomæa.)—*Nat. ord.*, Convolvulaceæ. *Linn.*, Petandria Monogynia. Native of "Asia, Australia, Africa, and even the warmer parts of the New World." An annual; flowers cream-colored, with purple eye.—(*Ibid.*, t. 5426.)

GLADIOLUS SERICEO-VILLOsus, (Shaggy-stemmed Corn-flag.)—*Nat. ord.*, Iridaceæ. *Linn.*, Triandria Monogynia. Native of the interior of the Cape of Good Hope. Three to four feet high; flowers greenish yellow in a very long, densely-flowered spike.—(*Ibid.*, t. 5427.)

TRICHANTHA MINOR, (Smaller-leaved Trichantha.)—*Nat. ord.*, Gesneraceæ. *Linn.*, Didynamia Angiosperma. Native of Tropical America. Flowered in November by Messrs. Veitch. "No Gesneraceous plant, perhaps, exceeds this in elegance of form and beauty of colors." It is a stove climber. Flowers purple, yellow, and crimson.—(*Ibid.*, t. 5428.)

CANSCORA PARISHII, (Parish's Canscora.)—*Nat. ord.*, Gentianaceæ. *Linn.*, Tetrandria Monogynia. Native of Moulmein. Leaves

orbiculate-perfoliate; flowers white. An annual.—(*Ibid.*, t. 5429.)

DENDROBIUM CILIATUM, (Fringed-lipped Dendrobium.)—*Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria. Native of Moulmein. Sepals green, petals yellow, lip marked with purple lines.—(*Ibid.*, t. 5430.)

CHRYSANTHEMUMS.—*Lord Clyde*, crimson, rosette form; *Saint Margaret*, orange, anemone-shaped.—(*Floral Magazine*, pl. 181.)

ERANTHEMUM TUBERCULATUM.—Native of New Caledonia. Exhibited by Messrs. Veitch, and obtained a certificate from the Floral Committee. Flowers white.—(*Ibid.*, pl. 182.)

SCHIZOSTYLIS COCCINEA.—Native of South Africa. Previously portrayed in the "*Botanical Magazine*."—(*Ibid.*, pl. 183.)

GLADIOLUS.—*Randle Jackson*. Raised by Mr. Standish. Peach-blossom colored, with dark crimson stripes.—(*Ibid.*, pl. 184.)

MAGNOLIA LENNE.—Believed to be of German origin, but introduced by Mr. W. Paul from France. It is one of the deciduous kinds. Flowers large, purple outside, inside creamy white, and fragrant.—(*Florist and Pomologist*, ii., 25.)

GRAPES.—We find three new grapes announced, but have not seen them. The first originated in Saxonville, Mass., and is sent out by Messrs. Hovey of Boston. The second is Mr. Brackett's seedling, larger than the Union Village. This is also sent out by the Messrs. Hovey of Boston.

The third originated in Poughkeepsie, N. Y., and is sent out by the Messrs. Reagles of Schenectady.

STRAWBERRIES.—Mr. Carpenter, of New York, offers a new native seedling named *Progress*, described as “of the largest size, color a brilliant scarlet, high flavored and solid. Plants perfectly hardy and very prolific.” *Buffalo Seedling* is the name of another native, sent out by Smith & Bryant, Buffalo, N. Y. It is said to have “great productiveness, size, flavor, and firmness.” We have not seen the fruit of either of these, though we have plants of the first.

COLEUS ATROPURPUREUS.—We have seen this *Coleus* at Mr. Peter Henderson's. Its

general appearance is somewhat like *C. Verschaffeltii*; but it is nevertheless distinct, the leaf being smoother and rounder, the color darker and more metallic. It will no doubt make a beautiful bedding plant.

DOUBLE PANSY, Good Gracious, (Donald Beaton's.)—Mr. Henderson has also imported the *Good Gracious Pansy*, a double variety raised by the late Donald Beaton. We have not yet seen the flower, but it is highly prized abroad.

VERONICA, Gloire de Lorraine.—A hybrid variety, with “flowers sky blue, lilac, and white, flowering from June to December.” It is offered for sale this spring.

MONTHLY CALENDAR.—APRIL.

Orchard, Fruit Garden, &c.—Any preparatory work neglected last month should be attended to without further delay, especially for the destruction of insect nests. Do whatever plowing may be needed as soon as the ground is dry, whether in the orchard, vineyard, or garden. Be careful not to cut up the roots of vines or fruit trees. Pruning should be finished at once, and vines uncovered and tied up. Vines may still be propagated from eyes, and cuttings may be put in the open ground. Grafting of fruit trees may now be done. When trees, vines, etc., are to be planted, get them in the ground as soon as possible. Uncover strawberry beds, and make new ones when wanted. Three or four canes are enough to leave to each stool of Blackberries or Raspberries. Shorten in the laterals.

The Grapery.—From the middle to the latter part of the month, according to location, the borders of the *Cold Grapery* will need to be forked up, and enriched when necessary. Do nothing, however, to excite the vines prematurely. Leave them along to the side of the house till the buds are well broken, when they may be tied up. Keep the house warm and moist when the vines have started, and in ventilating see

that no current of cold air blows directly upon them. In the *Hot Grapery* the first early crop will now be ripening, and the air may be kept a little drier. In later houses pinching in laterals, &c., should be attended to as directed last month. Ventilate with care, so as to avoid sudden changes. Dust with lime and sulphur on the first appearance of mildew, or if there is reason to suspect its appearance. Thin out where needed, and do it while the berries are small. Do not allow any vine to carry more fruit than it is able to ripen thoroughly.

Green-House.—More air should be given to harden off such plants as are to go out of doors. Azaleas will now be in their glory. Water regularly and abundantly. If any are to be re-potted, do it as soon as they go out of bloom. Pinching to make a compact head or form specimen plants should be done while the new growth is quite succulent. Repot *Caladiums*, *Begonias*, *Gloxinias*, *Achimenes*, and other dormant plants. Shift *Fuchsias* that need it, and give them plenty of room to grow. *Pelargoniums* should have plenty of light and room, and be watered regularly, or they are apt to drop their leaves. *Hyalcinths*, &c., past bloom, may be put out of

doors to make room for plants that are growing. Scarlet Geraniums, Verbenas, Petunias, and other bedding plants, may still be propagated from cuttings in the early part of the month. So may also Fuchias and Carnations for late blooming. Seeds of annuals and biennials may still be sown in pots. Insects must be looked after constantly, and plants generally kept clean and tidy, especially those that are to be turned into beds or borders.

Plants in Rooms.—Air may now be freely admitted at the windows. Watering will need more attention. Give most water to plants in bloom. Even Cacti, when in bloom, must be supplied abundantly. It must be understood, however, that a pot must never be set in a saucer, unless it contain some such plant as a Calla. Toward the end of the month some plants, such as *Laurustinus*, *Pittosporum*, Scarlet Geraniums, &c., may be put out of doors, if desired, gradually exposing them to the sun. The directions of last month, in regard to seeds and cuttings, may still be followed.

Ornamental Grounds.—Drives and walks should be put in order, and rolled. Rake off the lawn, if not already done. Trim edgings. Finish pruning shrubs, etc. Prune Roses, and be not afraid of the knife. Do all planting early in the month. Dig up beds and borders, and enrich them when needed, but only moderately, except for Roses. In addition to the usual bed-

ding plants, provide a good supply of *Coleus Verschaffeltii*; there is nothing more attractive than a bed of this beautiful plant. Set the plants about eighteen inches apart. *Centaurea candidissima*, well set up, makes a fine center piece, and Variegated *Alyssum* a good edging.

Vegetable Garden.—This is a very busy month in the vegetable garden, and he who keeps up with his work now will not be likely to get behind during the rest of the year. Finish spreading manure, and spade up the soil deeply. Sow seed of Onion, Beet, Carrot, Parsnip, Cabbage, Cauliflower, Celery, Lettuce, Peas, Spinach, Radish, and seeds generally; but do not sow Corn, Bush Beans, Lima Beans, Cucumbers, Melons, and similar plants, until the ground and the weather become settled warm, except they are protected by hand glasses. Cabbage, Cauliflower, Lettuce, etc., may be transplanted from cold frames. Hot-beds should be aired freely, and the plants hardened off and transplanted, keeping Cucumbers, Melons, Peppers, etc., till the last. Bean poles, Pea brush, etc., should be got ready, if not already done. Fork over Asparagus beds, and dig up the alleys. Sea-kale should be earthed up or covered with pots. Rhubarb is all the better for being blanched by covering with a barrel with both heads out. We judge that little will be done in the way of sowing seed this year much before the middle of April.

EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

SEEDS, ETC., RECEIVED.—We are indebted to the following friends for seeds. They will please accept our thanks, with the as-

urance that they will be well cared for and thoroughly tested. From Messrs. Fleming and Davidson, seeds of some choice

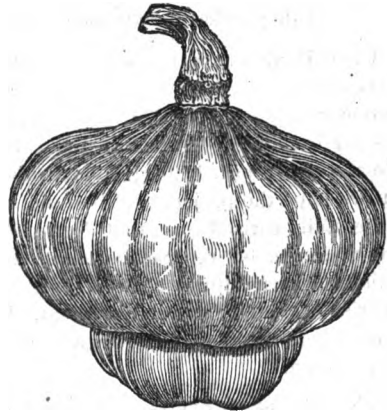
novelties in the way of Asters, Pansies, Calceolarias, &c. From Mr. Dreer, seeds of the Cook's Favorite Tomato, as well as some novelties, such as Godetia, Solanum, Datura, &c. From D. K. Bliss, seeds of choice new Asters and Pansies. From Mr. Buchanan, seeds of his blotched and striped Petunias. From Mr. Hogg, seeds of the Yokohama Squash.

A NEW AND PECULIAR ORCHID.—We lately found on our table a neat little box, inscribed, "An Orchid of a new and rare kind, flowered for the first time specially for" us. Being rather fond of Orchids, and, withal, at least in this instance, a little curious, we opened the box very carefully, and, sure enough, there was an Orchid of a very peculiar kind. In form it was symmetrically angular, and of a fine and delicate texture. The color was pure and "white as the driven snow." The flowers of Orchids are remarkable for their grotesque and beautiful forms, resembling butterflies, doves, &c., and in the flower of this, with a little aid from the imagination, might be seen something strongly resembling our own initials, very beautifully and delicately formed. We were delighted, and resolved at once that this Orchid should have a warm and sunny place in our heart-house. We hope never to wet it except with tears of joy, and wish that such may fill the eyes of our unknown friend all the days of her life. We thank her most sincerely for the *Orchid*, and the delicate hint which it conveys—to keep our nose clean!

THE PRAIRIE SEEDLING POTATO.—This is a new Potato that originated at the West. It was raised from seed by Mr. Moseby of Illinois. Mr. W. Shotwell having brought it to notice there, it was called the "Shotwell Potato." Mr. Henry R. Shotwell, of Rahway, N. J., having received it without name from his relative, called it the *Prairie Seedling*; and thus, unfortunately, it is now known under two names. Mr. Shotwell sent a small quantity of it last season to Mr. Alfred Bridgeman of New York,

who sold it under the name of *Prairie Seedling*. Our readers will now understand that the *Shotwell* and *Prairie Seedling* are one and the same thing. We grew some of them last season. They were not planted till the 28th of May, and were not well cared for; but the yield was large and very fine. The tubers were also large, and the quality very good; so good, that we wish we had enough to plant a couple of acres. Mr. Shotwell, we believe, has sent Mr. Bridgeman a lot for sale, so that those who wish can give them a trial.

THE TURBAN, OR TURK'S HEAD SQUASH.—We have to announce the appearance of another new Squash, introduced from France, and made better known by Mr. Gregory, of Marblehead, Mass. It is called the *Turban* or *Turk's Head Squash*, of which we herewith present a portrait. It



is different from the old squash of this name, which has for many years been grown as an ornament. Very fine specimens were shown in New York last fall. It weighed about seven pounds. The flesh is dry, fine grained, and sweet, with a rich flavor. It is mostly prized, we think, as a fall squash. Those who have used it as such pronounce it to be first rate, and it is no doubt an acquisition. Thus, with the *Yokohama*, *Turban*, and *Hubbard*, we can have the best of squashes all the year through.

*Black Knot in the Grape Vine.*

THE "BLACK KNOT" IN THE GRAPE VINE.—Last fall a friend brought us two or three shoots of a vine, to learn what was the matter with them. On examination we found them to be affected with a "black knot," which seems to be identical with that found on the Plum and the Cherry. We can not discover the least difference, and have no doubt that both owe their origin to a similar cause. We have prepared an engraving of it, that the reader may judge for himself. We wish our friends engaged in grape culture would examine their vines during the coming season, and send us specimens *as soon as they are formed*, should they unfortunately have any.

A NEW HORTICULTURAL SOCIETY FOR NEW YORK.—A society is now in process of formation, to be called "The Horticultural Association of the American Institute." We are not prepared to give particulars, but we hope the project will be fully and successfully carried out, that New York may no longer be reproached with being without a horticultural society. The enterprise has our hearty endorsement. We shall allude to the subject again at the proper time.

A NEW WORK ON FRUITS.—We learn that Mr. Le Roy, of Angers, France, is engaged in the preparation of a new work on Fruits, which will embrace the history and description of all fruits which have been known in France since the tenth century. It will make about six volumes, and its arrangement will be similar to that of Mr. Downing on the same subject.

THE BROOKLYN SANITARY FAIR.—This, we are glad to know, has been a great success, the receipts having been upward of \$300,000. Our horticulturists were not

wanting in spirit, Dr. Grant alone having presented \$400 worth of grape vines. We hope that they will do even better in New York.

A WORD TO MR. KNOWLTON.—In a card to which our attention has been called, Mr. Knowlton says: "The earlier numbers of Mr. Mead's 'Hints on Grape Culture' I never saw, and only read his latter ones hastily." "I wrote the work of which he complains entirely at my office table, without any work of reference to direct or guide me."

This is all of the card that is of the least moment. We have the best of evidence that Mr. Knowlton had most, if not all, of the early numbers of the "Hints," and his work affords additional internal evidence of the fact. Such idiomatic phrases as "snap and crack a little," "safety valves," and others, do not come by accident. The inference is, that, if Mr. Knowlton did not consult the "Hints" while writing, he previously read them so thoroughly as to get the ideas well stored in his mind. But the fact is, that the whole idea of the reversed arms and safety valves was taken from the "Hints," and nowhere else. Mr. Knowlton's whole description of the process, as well as the words used, shows this plainly. We do not know that we should have complained of this, even though no acknowledgment is made; but he sums up by calling it "*our* (his) system." Now we have nowhere in our "Hints" laid claim to any originality, and where we have used the illustrations or labors of others, we have first obtained permission to do so; but at the proper time we shall claim some small share of originality in the reversed arms and safety valves, having introduced them some

twenty-two years ago, previous to which time we doubt whether Mr. Knowlton will find any evidence of their existence. Be this as it may, Mr. Knowlton, in writing his work, had before him the evidence that the system had been publicly described, and he therefore had no right to call it "his." He pretends to know more than we do, and we shall not stop to dispute it; does he not know, therefore, that, if his directions about the safety valves are carried out, the vines, in nine cases out of ten, will be ruined? But we have neither the time nor the disposition to multiply words or bandy personalities with Mr. Knowlton; and as to being "jealous" of the appearance of his work, we beg him to spare us, for nobody in the world but himself would ever suspect such a thing.

CATALOGUES, &c., RECEIVED.

C. W. Grant, Iona, near Peekskill, N. Y.—Illustrated Catalogue of Vines.—This has been greatly enlarged, and many superb engravings added, so that it is now rather a manual for the grape grower than a catalogue, and the best thing of the kind issued, containing instructions for the treatment of the vine in all its stages. It is sold for 15 cents.

Transactions of the Indiana Horticultu-

ral Society, at its Third Annual Meeting, held at Indianapolis, Jan. 5-7, 1864.

Agricultural Department.—Bi-Monthly Report for January and February, 1864.

Andrew Bridgeman, 878 Broadway, New York.—Descriptive Catalogue No. 8, French Hybrid Gladiolus, and other Summer and Autumn Blooming Bulbs.

J. M. Thorburn, & Co., 15 John Street, New York.—Annual Descriptive Catalogue of Flower Seeds, &c., with a list of 115 varieties of French Gladiolus and other Spring Bulbous Roots.

Robert Buist, Jr., 922 and 924 Market Street, Philadelphia.—Catalogue of Select Roses.

J. A. Bruce & Co., 52 King Street, Hamilton, Canada West.—Catalogue of Seeds for the Farm, the Kitchen Garden, and the Flower Garden, &c.

Robert Buist, 67th Street and Darby Road, Philadelphia.—Select Catalogue of Greenhouse, Hot-house, and Hardy Plants.

James J. H. Gregory, Marblehead, Mass.—Retail Catalogue of Garden Vegetable Seeds.

Charles Davis, Jr., Phillipsburgh, Warren County, N. J.—Price List of Fruit and Ornamental Trees, Grape-vines, Shrubs, &c.

James M. Mattison, Jacksonville, Tompkins County, N. Y.—Descriptive Catalogue of Fruit and Ornamental Trees.

Correspondence.

Reading, Mass., Jan., 1864.

DEAR SIR: I have a trellis on the south side of my wood-shed, fourteen feet wide, and eight feet high. In the middle of it I have a Delaware vine, two years planted, which last year sent up a cane about fifteen feet long and half an inch in diameter at the base. I cut it back in the fall to about four feet, intending to take the arms at that distance from the ground. If it should this year form two canes of sufficient length and size, would it answer to extend them seven feet each way to the

extremity of the trellis? Or should I make the arms at first only three or four feet, and extend them more gradually? Or would you advise extending the arms of the present vine only three and a half feet each way, and planting another at each end of the trellis, to be grown with a single arm three and a half feet towards the center? And, having in one of these ways provided for the upper four feet of the trellis, would there be any objection to planting two more vines, on one each side of the present, and midway between it and the end of

the border, to cover the *lower* four feet? As my present vine has grown so vigorously, would not the space allotted to the others (four feet by seven) be probably found too contracted? And if not, would two Ionas answer as well as two Delawares? Or one Iona and one Israella? Please give a tyro the benefit of your wisdom and experience.

My Rebecca (of which so many complain for tardiness of growth) has done splendidly. The first year it grew about eleven feet, and the cane was as large as one's little finger. Last year it made full thirty feet, (two canes,) and the wood considerably larger. I kept the laterals well pinched in; but three or four of them, that were less carefully watched, for they were beyond where I intended to cut the canes for arms, seemed determined to do something in spite of me, and so *blossomed and set three or four bunches of fruit in July*. And these were on laterals that sprung from wood of the same season. Is not this quite unusual? In making the border I dug in a large lot of hickory nut-shells. Can these have had any thing to do with such an unusually vigorous growth?

I am satisfied that the original constitution of a plant has more to do with its growth than most suppose. This Rebecca, as well as the Delaware, were purchased of Dr. Grant, and were vigorous plants at the outset. But I have another Delaware, bought elsewhere, which I have petted and nursed now for *five years*, and it has borne no fruit, and been nothing but an invalid from the first. Last year I thought it was going to die outright. It probably will never make such a vine as the first.

W. H. W.

[Your questions are very clearly put. Your best plan is the last one suggested, for which you have ample room. If your first plan were adopted, it would be necessary to form the arms two or three feet at a time; but arms of seven feet are too long for uniform productiveness. In a few years the spurs near the trunk would

fail. We would advise you, therefore, to plant additional vines. Put the Delawares at each end of the shed, and the Iona and the Israella midway between. The latter would then fill the lower course, and the Delawares the upper course. This would be an excellent plan, and afford you much gratification. We are glad to hear that the Rebecca has done so well with you; for it is a very nice grape when well grown. You no doubt had a good vine to begin with; and you seem to have planted it properly in a well-prepared border. If *all* these conditions generally obtained, we should hear of fewer failures. It is not quite unusual for fruit to set on the laterals; but it seldom or never ripens. It is quite probable that the shells had something to do with the growth of your vines. If they acted in no other way, the shells would keep the border open and porous, and thus favor the growth of the vines. If that Delaware has been an invalid for five years, we should consider it past recovery, and give it a decent burial.—Ed.]

EDITOR HORTICULTURIST:

I WISH to plant a small vineyard, in South Central Ohio; soil sandstone, high; no muck on any place near. Can I succeed?

At a distance from any large city where the finest productions are apt to be appreciated, had I better plant Delaware, or some variety which will bear more weight of fruit, and be more showy, though the quality may be inferior? And if so, what variety or varieties?

The fruit will be mainly for market.

A friend is quite partial to the brisk flavor of Catawba—prefers it to Delaware even. Can you name some more reliable variety, of similar flavor, and as good, or better, for the table? Your grape articles have given me more light than all I ever read on the subject before. Hasten out your *book*, for at least *one* of your subscribers is hungering for it.

R. J. B.

[We would advise you to plant the Delaware. You will have something equally

good for wine and for the table, and will not always be dependent upon the market. As a substitute for the Catawba we should recommend the Iona. For early grapes, we would name the Israella and Creveling, as being the best two early grapes that we have had long enough to test. We think, too, that the Diana would do very well with you. We have no doubt that you can succeed. In the absence of muck, gather all the leaves you can get, and use them freely in your compost heap. We are glad to know that you have found instruction in our "Hints." The book is going on.—ED.]

NAUVOO, Ill., Feb. 15, 1864.

MR. PETER B. MEAD:

Dear Sir: I fear that the wine crop of the United States this year (California excepted) will prove a very poor one, the fruit having been killed by the terrible cold storm at the commencement of the present year. The Catawbias, Isabellas, Dianias, Rebeccas, and even the Hartford Prolifics, which I hoped could stand cold weather better than almost any other kind, seem to be entirely dead, as high above the ground as they were bare, and not covered with snow. There are several other sorts equally as badly hurt, and there are none of whatever kind that have not suffered a great deal.

Those that seem to have suffered the least, and of which some grapes may perhaps be expected, are the Delaware, Concord, Clinton, and some of the Norton's Virginia Seedling. The Logan and some of the To-Kalon also appear to have a few sound buds, but of even all these sorts, none are without a very severe touch of hurt from the intense cold. Each bud, as you know, contains from two to four eyes or buds; the center one, which is the best fruit-bearing, is dead, even in the hardest kinds; but in the Delaware, Concord, and Clinton many of the buds contain still one or two sound living eyes or buds. Those who took the trouble last fall, and buried their vines, may congratulate themselves, for their prospect is promising;

there are, however, very few who took that precaution, because in former years the laying down business proved not to be always the most profitable. Of the Delaware, we made last fall, for the first time, three gallons of wine, and I acknowledge that it did not meet fully with my expectation, though some others who tasted it seem to be of somewhat different opinion. It may be that my taste is, as the proverb says, not sufficiently cultivated; still it appears to me as if I had been tasting a great many different good things in my life, generally without differing very far in opinion with others. A gourmand or epicure would, perhaps differ with me, if I say that a well-prepared piece of beef-steak is better than a dish prepared from the contents of the entrails of snipes, or if I should say that I prefer a good piece of roast beef to a dish of shrimps; but I believe, however, that a great majority of jurors who would be able judges about good things to eat, would take my side in these questions. So far as I am acquainted with the Delaware, the grape, though small, pleases me very well, and because it begins to prove to be very steady, and the vines grow to a better size than what I expected. It would appear even more recommendable but for one fault it has—its unhealthy, shriveled, wrinkled leaves, which are far from pleasing. The Concord appears to be at least equally hardy as the Delaware, in quality of the grape (and superior to it in the leaves) possibly not fully as good, but nevertheless a large and beautiful grape, and of good quality when perfectly ripe: How it will be as a wine grape, I can not say, by my own experience, but what I have heard of it out here West, it makes a very pleasing wine, if not so strong as the Norton's Seedling. I shall plant it without hesitation. I hear that our Congress intends to tax native wine at twenty cents per gallon, instead of, as it was justly expected, to release it from the present five cent tax. It would be fully as just to tax our corn, wheat, potatoes, apples, etc., as to tax the native wine. Who-

ever has been in the wine-raising business must know how great the expenses and outlays are, ere profits can be earned from it. There may, perhaps, be a few years when many grapes may be raised, and some profit made, and the prospect for a new crop may be promising, but some unexpected, severe atmospherical changes will certainly take place, and all the hopes of a grape crop are gone; but the outlays and trouble are still nearly the same, the capital invested in trellis-work, wine cellars, casks, vats, wine presses, etc., are there, and are assessed as usual, and taxes have to be paid for all, and what advantage are such property and improvements to the owner? It is worse than a dead capital, because the owner of such property has to pay taxes for a thing which is then of no advantage to him. Such a tax would almost prove a death-blow to the wine-raising business, instead of what ought to be encouraged, and I hope that Congress will consider the matter well ere they pass an act which probably would destroy a branch of industry in its youth, which otherwise would probably one day be a benefit to the country. Mr. Editor, excuse my lengthy letter, for I give you the promise, not to trouble you again very soon, unless necessary.

Respectfully yours,

JOHN H. LUENHARD.

[We regret very much to hear of the destruction of your vines. We have similar accounts from others, and fear the worst. In your climate, it would prove a great protection to lay the vines flat on the ground, if you do not wish to take the trouble to cover them. Did it occur to you that the pooriness of your wine *may* have been in the making, and not in the grape? We have tasted Delaware wine made by Mr. Mottier, and it was by far the best American wine that we have seen. It sold for \$24 a dozen when Catawba was selling for \$10. This price was paid by persons who know what good wine is. We think Congress will make a great mistake

in laying such a heavy tax on native wines. It is a branch of domestic industry too young yet to bear it. We do not care if they lay a tax of one hundred per cent. on adulterated wines, but we hope the *pure* article may be spared.—*Ed.*]

In the Jan. number of the *HORTICULTURIST*, I see an article on heating by hot water, by J. Fleming, which is very good, and in which he says that, if the flue is built on the "Dingwallian" principle, it may be made to answer the purpose very well. But I would suggest an improvement on that; for when the flue is long and the weather mild, or damp and calm, even the "Dingwallian" principle will not save you, when you first start or build your fire; for the brick will conduct the heat from the smoke and air in your flue faster than the fire will produce it; and it is well known that when smoke or carbonic acid is as cold as the surrounding air, it is heavier, and will not rise up through the upright flue or chimney, and the result is, a smoky house. Now, my improvement is to make an opening at the base of the upright flue, so as to allow you to build a fire, and then do so (when the weather is damp) before you build a fire in the arch. Then shut up the opening and build a fire in the arch, and when the smoke from the arch reaches the upright, the fire at the base of the upright will warm the smoke, so that it can ascend, and also produce a draft, by the heated air and smoke producing a vacuum by the ascent, and by the time your fire is burned at the base of the upright, your horizontal flue will be warm, and then your trouble is over.

Yours truly,
Lockport, N. Y.

J. CRAINE.

[The trouble alluded to by Mr. Craine is often experienced where flues are used. His remedy is a simple one, and easily applied. When the draught is established, it will usually take care of itself.—*Ed.*]

THE
HORTICULTURIST.

VOL. XIX.....MAY, 1864.....NO. CCXV.

Growing Plants in Rooms.—III.

WE have now treated briefly of two of the causes chiefly concerned in the want of success in growing plants in rooms, viz., unsuitable conditions and improper selection of plants; and we trust that we have thrown some light on the subject. In our first article we alluded to one other cause, *the want of knowledge*, about which we propose to offer a few remarks. Want of knowledge, in fact, may be said to cover the whole ground; still, no amount of knowledge will command success in the absence of the first two conditions; for Nature, in respect of her laws, is an arbitrary mistress. We do not propose, in the present article, to supply this knowledge, the want of which is so keenly felt by many, but rather to point out in what it consists, and how and where it may be obtained. We shall from time to time, however, give an article on the subject, and endeavor to make it plain to the understanding of all.

We may say, in the first place, and in a general way, that there exists, among those who desire to grow plants in rooms, no small degree of ignorance of the nature and wants of plants, and any great meas-

ure of success in their culture, under such circumstances, can not reasonably be expected. We do not expect a man to develop the best qualities of the horse without some considerable knowledge of his nature and wants; we do not expect a mechanic to become a skilled workman without a knowledge of the materials used in his profession; we do not expect a man to excel in the art of painting without a knowledge of the laws of color, perspective, &c.; and so of all the sciences and arts. Why, then, should we expect any one to grow plants in perfection without some knowledge of their nature and wants? It is true that some persons, by dint of long practice, will learn how much heat, light, and water is needed to sustain some of the simplest and hardest forms of vegetable life; but this is very different from that knowledge which comprehends the *laws* of vegetable life, and their application to its multifarious manifestations; and the difference between these two degrees of knowledge is not greater than the different degrees of pleasure which each affords. There are others who *admire* flowers, but will not take the trouble to learn how to

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MAY, 1864.

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grow them, and consequently never know how to *love* them. Such persons have little conception of the amount and degree of pleasure of which they thus deprive themselves. As between a simple *admiration* and a true *love* of flowers, there is all the difference that there is between mere animal appetite and a profound intellectual feast. There is nothing that gives so much vigor and elasticity to the mind as the love and study of nature, and there is nothing that yields a purer and more lasting pleasure; when it includes, as it naturally should, a reverent love of the Father, there is nothing that erects such a firm barrier between the heart and the cankering ills of the world without. A true lover of plants is a lover of his fellow-man and of good works.

But let us be a little more specific, and see what is wanted by those we are more directly addressing. A scientific knowledge of Botany is desirable, as it greatly enhances our love, and makes us so familiar with the constitution of vegetable life, that we are enabled, almost at a glance, to determine the wants of a particular plant; but such a knowledge of Botany is not indispensable to the culture of plants. It is indispensable, however, that the nature of any particular class of plants grown should be studied practically, so as to become familiar with their wants in reference to soil, light, heat, and moisture. A practical

knowledge of this kind is best obtained by growing the plants; but if one is confined to this source of knowledge alone, many mistakes are made at first, much time is consumed, and not a few plants ruined. The proper course is to begin with a few plants of the easiest culture, such as the Scarlet and Sweet-scented Geraniums, the Calla, Sweet Alyssum, &c., consult some intelligent grower, read the best writers on the subject, such as Rand, Buist, Bridgeman, &c., and subscribe for one or more good horticultural magazines. These may be considered indispensable aids, and will be found very pleasant companions. Careful reading and patient practice will open the road to success, and pave it with gems of the most brilliant hues. You may live in a world of your own creation, peopled with angel forms, always wearing the radiant smiles of the blessed. Flowers are great humanizers, ripening and mellowing the heart for the better life. Wherever you see a few plants in a window, however humble the house may be, you may take it for granted that goodness has not altogether taken its departure from its inmates. Inestimable soothers and comforters under all afflictions, we would not part with our knowledge of plants for all the pelf the world contains. Bring up your children to love plants, and you will put them in possession of one of the brightest links in the chain that connects time with eternity.

A GARDENER'S LODGE.

BY FREDERIC S. COPLEY, ARTIST, TOMPKINSVILLE, STATEN ISLAND.

THE accompanying design was made for William C. Bryant, Esq., and was erected on his beautiful estate at Roslyn, Long Island, in 1862. It stands on the hill above his residence, overlooking the Bay from the village to the Sound, possessing one of the finest views on the Island. It was intended as a gardener's lodge, and to accommodate one or two families, as circumstances might require, (one on each floor,) giving each

three rooms, and a joint right to the scullery, sink, and cellar.

Arrangement.—The first story is 9 feet in the clear throughout, with every convenience suitable for the health and comfort of the occupants. From the porch, a small hall, lighted from the roof, is entered, with doors on either hand, to parlor or living room, and staircase passage in front, communicating with the kitchen

at the back, chambers above, and cellar beneath. (See Fig. 2.)

The chamber floor, second story, is 9 feet in the clear through the center, and

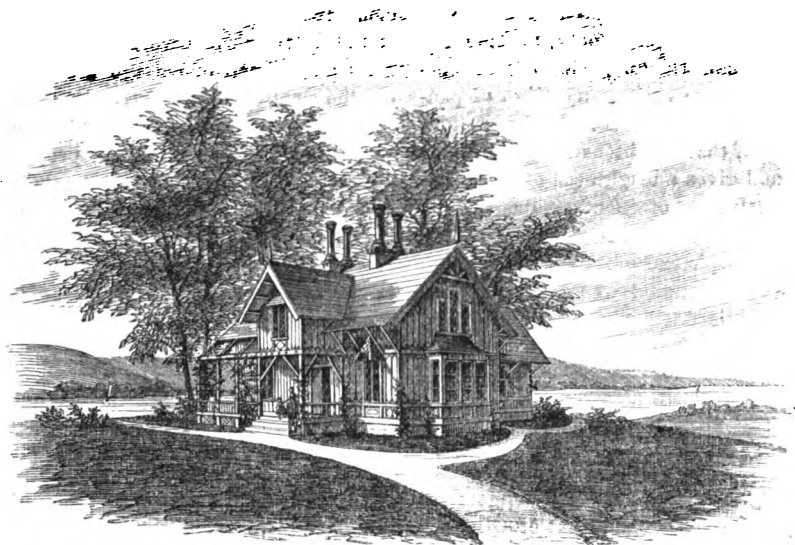


Fig. 1.—Perspective View.

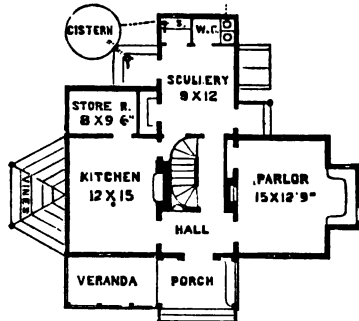


Fig. 2.—First Floor.

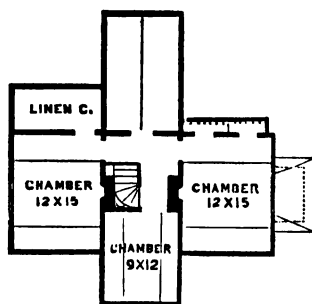


Fig. 3.—Chamber Floor

6 feet at the sides, (from the floor to the plate,) the roof cutting off three feet of the ceiling at the sides at an angle of 45 degrees. This loss of a few feet of the ceiling is more than compensated for by the cottage-like effect it gives to the rooms, harmonizing the inside with the out. The two principal chambers are provided with fire-places and ample closet room. The one over the parlor has two closets, built outside the frame, and a door into the single room, over the porch, forming a most desirable family chamber. Both these

rooms have ventilators in the same chimney breast, and the small one may be warmed by a stove leading thereto. The other has a large closet over the store-room for trunks, linen, &c. The attic room over the kitchen wing is intended for the help.

By reference to the plans, it will be seen that every room is of good size and form, cheerfully lighted, thoroughly ventilated, and of easy access one to another, at the same time that privacy, so essential, is maintained throughout.

Construction.—The building is constructed of wood, vertically sided, and battened, (with $1\frac{1}{2}$ inch tongued and grooved pine boards,) with horizontal strips in line of the window sills and floors, to hide the butts and small triangular pieces in the corners, which gives the pretty effect of paneling. The whole is stained by a mixture of oil, &c., that heightens the grain of the wood, and gives a brightness of color, and that cheerfulness of effect, so desirable in rural dwellings. The roof is of slate, in bands of purple and green, and the chimneys are surmounted by terra-cotta pots. The whole is filled in with brick. Cost,

\$—, built in a substantial and plain manner, of plank frame, &c., with cellar under kitchen and center, (7 feet in the clear,) cemented on the gravel the same as cistern, and all interior wood work stained.

As a specimen of cottage architecture, (on the smallest scale, lodge class,) it will rank as one of the best. For simplicity, variety of form, symmetry of proportion, with convenience of arrangement and economy of space and construction, it forms a model cottage, that any one might live in and many covet, besides being an addition to the landscape and an ornament to the grounds.

NOTHING NEW UNDER THE SUN.

BY HORTICOLA.

WHEN we wrote the "Gleanings from our own Experience and that of Others," published in the February number of the HORTICULTURIST, we believed the method of Dubreuil, mentioned in his work, "La Culture Perfectionnée," etc., of making cuttings of grape vines, *new*. We mean the method, according to which, the cuttings are buried in little trenches, but inverted, i. e., with their tops downward. Dubreuil, it is true, does not pretend to be the discoverer of it; still he recommends it, and, we think, justly, and call it, therefore, his method.

A few days ago we read, in a rather desultory manner, a little book, published at Erlangen in 1859, (*Die Weinbauschule von Dornfeld.*) Its chief interest lies in the fact that it contains a circumstantial and accurate description of the vineyard culture as practiced in the kingdom of Württemberg. On page 59, the author says, that in the vicinity of the city of Heilbronn it is customary to treat the cuttings, before planting, exactly as recommended by Dubreuil. The process is there called *stutzen*. The only difference is, that the cuttings are put for several days in water; some moss and good soil are thrown into the trenches, which are

filled up again after the cuttings are placed in them, with their tops downwards. Their ends are then covered with moss about an inch deep, and a little mound, about a foot high, is raised on them. They are taken out at the end of May or the beginning of June.

It would certainly be a gratuitous labor to trace this method back to its origin; it is, no doubt, mentioned in other works on the vine. Still Dubreuil had evidently no knowledge of it before the publication of his *Culture Perfectionnée*.

In reading Columella, an agricultural writer who flourished about nineteen centuries ago, we can not help admiring the skill with which the vine was grown by the Romans; a skill so great that very little indeed has been added in the lapse of ages. Mr. Jaeger, under whose auspices Rubens's book on the vine was published, it being a part of Jaeger's highly valued horticultural library, shows that, as he confesses to be, he is a stranger in viticulture; for he extols Rubens's book on account of *the great number of new discoveries* he says the book contains. Still there is not a single new discovery in it. Old discoveries were discoveries in their time; they are no discoveries for us. Rubens's book is a very

useful little work ; it is so good, because there is so little in it that is new, and that little is not good.

Pliny, Pliny, how deeply thou wast impressed with the imperfection of thy vast knowledge, which thy kinsmen thought as varied as nature herself, when thou exclaimedst :

Quantum est quod nescimus !

THE BEAN WEEVIL.

BY THE EDITOR.

It will probably be new to most of our readers that Beans are "afflicted" with *Weevils*; but so it is. They are not, however, beans "to the manor born" It may be remembered that we gave an account, last fall, of some Lima Beans, imported from Lima, that persisted in bearing no fruit. Some of them were left over, and placed in our seed basket for another trial. A short time since we overhauled them, when, to our amazement, we found them completely riddled with holes. A closer examination showed that these holes were made by a weevil, many of which were at the time eating their way out. In the same basket were other Lima Beans, (not from Lima, however,) which showed no signs of the weevil. Two conclusions may be drawn from these facts: first, that these weevils are of foreign origin; second, that they require *two years* to undergo their transformation. They do not seem to be identical with the weevil which infests Peas raised here, and which undergo their transformation in a single year.

We have stated that the Beans were completely riddled. We took *thirty-nine* weevils from one bean, and left others in the same bean to eat their way out. We present a drawing of one of the beans. It will be understood, of course, that the other side of the bean here shown was also

[It must and does happen that persons engaged in similar investigations will make similar discoveries, without either knowing what the other has done. We would suggest to Horticola that very interesting instances might be cited, and the search for them would be a pleasant pastime for one of his inquisitive turn of mind.—Ep.]

full of perforations. This is altogether an unusual thing with us.



We have another interesting item to add on the same subject. We received from the Agricultural Department last spring a small bag labeled "Mexican Beans," from Mexico, which proved to be identical with our "Turtle Soup" Beans. A few of these were left over, and were also placed in the basket. These too were riddled with weevils, while beans of the same kind, in the same basket, but bought in New York, were entirely free from them. We give an illustration of one. These



weevils, like those in the Lima Beans, had also been *two years* in undergoing their transformation. They are the first example of the kind that we have ever seen.

We merely give the facts for the present. We have sent samples of the beans and the weevils to Dr. Fitch, and hope to hear something further about them. We have come to the conclusion that weevils "know beans" as well as other folks.

PLANT HOUSES.—XII.

BY THE EDITOR.

In our present illustration we have an example of what may be done with a wall

necessary, for certain purposes, to cut away an embankment, and build a sustaining wall. After this had been done, we were asked if the wall could not be devoted to some useful purpose, and it was determined to build a lean-to graperies against it. The chief difficulty in the way was the wet and springy nature of the ground at the level marked water line in *Fig. 2*. It was found, however, that it

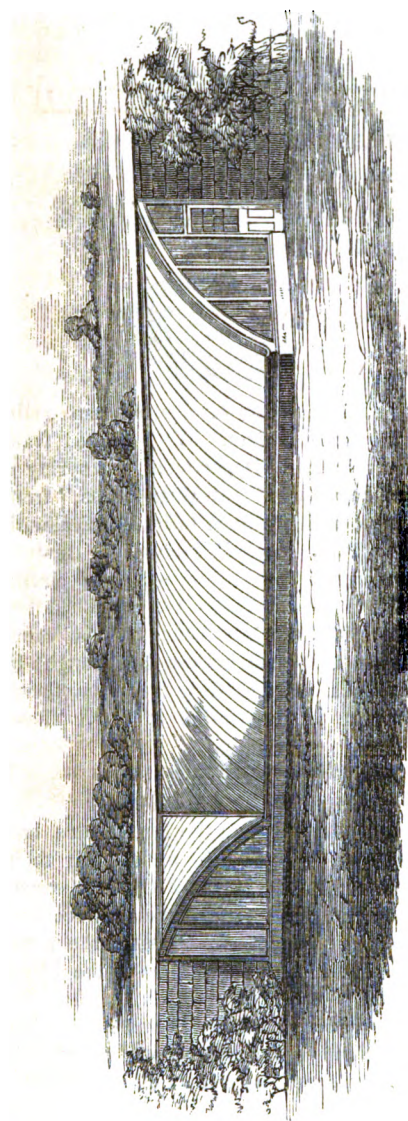


Fig. 1.—Perspective.

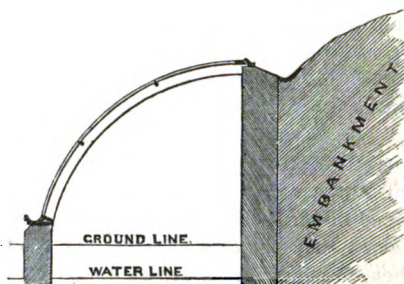


Fig. 2.—Section.

that could not well be applied to any other useful purpose; at least not to any producing such gratifying results. It became

could be drained; but at certain seasons of the year surface water would accumulate from the overflow of a milldam. But there is generally some way to overcome difficulties. In this case, the border was placed inside the house, and well raised, with a firm concrete bottom between the ground and water lines, and suitable drains connecting with the main drain under the front wall, to secure the requisite degree of dryness inside. Up to the present time we believe every thing has gone on very favorably. We have no doubt that many other places, now deemed useless, might be converted into good graperies at an expense that the results would fully warrant. In case this was successful, it was the owner's purpose to extend the house along the wall at the left; and it was therefore deemed best to insert the hip at the angle, to save future expense in tearing down the end of the house.

Fig. 1 is a perspective view of the house, which, in connection with *Fig. 2*,

will give the reader a good idea of the general arrangement. *Fig. 3* is a plan. The roof is curvilinear, like those already described in former articles in this series.

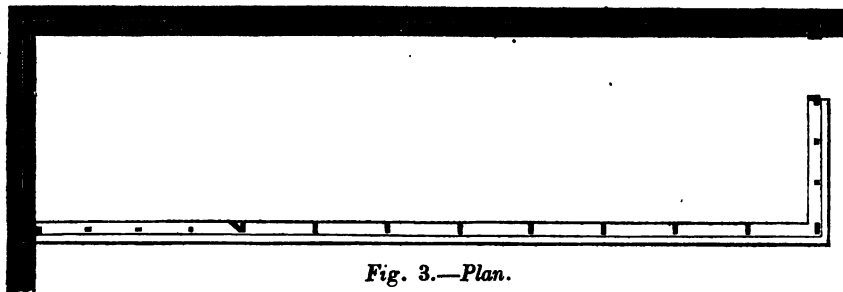


Fig. 3.—Plan.

Under the circumstances, we feel a good deal interested in the success of this house, and hope the owner's anticipations may be fully realized.

THE GRAPE ROT AND MILDEW.

BY J. STAGMAN, LEAVENWORTH, KANSAS.

THE subject of the *grape malady* has engaged the attention of every writer of any note who is acquainted with its effects. These persons have given various theories respecting the cause of the disease and the remedies to avoid it. While one will contend it is in the manner of pruning, another will say it is the nature of the soil and location; still another is certain it is atmospheric, while nearly all agree that it is accompanied by excessive moisture. All these various theories may approximate towards the truth, yet neither of them gives the true cause of the disease or the remedies to avoid it.

The fact that rot and mildew are accompanied with certain conditions common to most theories, proves one general cause covering them all, which gives the apparent plausibility to them.

To fully elucidate this subject, we will consider the disease under two separate heads. The first, grape rot, or rather rapid decay. The second, mildew, dry rot, or slow decay. These two maladies are very distinct in their action, and very opposite in their tendencies. What will cause the one will prevent the other; they can not exist at the same time in excessive action,

for one is produced by a positive state, and the other by a negative.

The positive produces an excessive vegetable growth, while the negative retards it. Properly speaking, there is but one cause, but two conditions; both of these may take place in the same season—one is very likely to follow the other. When both of these conditions are properly balanced, there will be a healthy vital action, with neither the excessive growth nor the opposite. The one rather predominates in the young growth and commencement of the season, the other in the after growth and latter part of the season. The positive mostly develops the stock and vine, the negative the fruit. It acts on all vegetation, but some are more easily affected than others. The primary cause we believe to be electrical under its two conditions, positive and negative; when the first greatly predominates it produces the rot, and when the latter greatly predominates it produces the mildew. The evidence in favor of this theory appears to be more conclusive than any other, and reconciles many of the difficulties connected with other theories, and is in harmony with the philosophy of vegetable growth,

which may be seen from an illustration of the subject.

The grape rot, or rapid decay, takes place under the conditions most favorable to an excessive electrical action. For instance, damp atmosphere is a good conductor of electricity, and rain is much better, and when clouds are highly charged with this fluid they are in a positive state, compared with the earth and surrounding objects which contain less.

The result is, that the superabundant fluid in the clouds finds its way rapidly to the earth through the medium of the moist air, rain, and vegetation; consequently, every moist leaf, twig, and vine will receive an excess, which will produce a very rapid growth while this state continues; if this excessive action continues, the sap will increase in its action also, taking up an increased quantity of water and crude material which is unnecessary to a healthy growth, which will enlarge the conducting capacity of the stock, while the evaporation is not increased in like proportion.

If this state continues long enough, or comes in quick succession, accompanied with frequent lightning, it will hasten the rapid destruction of the fruit, and an unhealthy and immature vegetable growth.

No motion can take place in any organism without electricity; it is the living, moving principle of animated nature.

If this theory is true, that electricity is the cause of the movement of the fluids in vegetation, an increased quantity or excessive action long continued will produce the rot or rapid decay.

A very luxuriant growth is made at the expense of the fruit, for it can not mature and perfect it under such circumstances; it is only by retarding the growth that we hasten the maturity and the production of the best fruit; for that reason, young, vigorous growing trees and vines do not bear.

That the sap does not flow by capillary attraction or any inherent principle within the stock, may be proved by the slow growth of the horizontal branches, or by

gradually bending all the vertical twigs and branches to a horizontal position, which would not materially affect the flow of the sap; neither could the pinching in of the branches retard its progress but slightly.

But, according to this electrical theory, the bending or pinching in of the branches would have a direct and material effect upon its conducting power, upon the same principle that a lightning rod or conductor to a house would have its action diminished or nearly destroyed by breaking off the point or bending the rod horizontally.

In harmony with this theory, we find the most rapid growing trees, and those that come most slowly to bearing, of a very erect growth, their leaves more sharp, long, and numerous, every twig pointing directly upwards, with their conducting points ready to secure imperceptibly all the electricity they can to hasten their growth to maturity.

If we are correct in our reasoning, any excessive pruning of a tree or renewal of a vine for the purpose of forming new wood, is deleterious to the production of good and abundant fruit. Therefore we should obviate any excessive pruning; we should so balance a tree and vine from the start that it will not need more pruning than will simply fulfill its healthful requirements; diffusing a general short, mature growth throughout the whole, and its fruit equally distributed, and that state continued from year to year.

We shall now make a few remarks on the grape *mildew*, which we believe to be produced by a negative electrical condition.

This takes place at a time the most unfavorable to the development of this fluid, or to its excessive action. For instance, in a very dry season, when the atmosphere is a poor conductor, and when the earth contains but little moisture; when this extreme state continues long enough, and tolerably early in the season, before the wood matures, the sap flows slowly, the vessels contract until the plant loses its

vital action; the mildew is then seen on the leaves, which soon begin to drop from the vine; the fruit does not ripen, but remains insipid and worthless. This condition may be seen in a very dry season on some varieties of the grape, gooseberry, and pea, but more frequently it is seen in a green-house graperly with a dry atmosphere and soil, and with imperfect ventilation.

In harmony with this theory, vines or plants will not do well and remain healthy if placed in glazed pots, with a dry atmosphere, though the soil be sufficiently wet; neither will a damp atmosphere do, unless the earth is moist also. The reason of this is, the conducting power is in proportion to the perfection of the circuit; if it is interrupted by a non-conductor for any length of time, it produces its deleterious effect in the form of mildew or slow decay.

This explains why there is so little benefit produced by watering plants in a very dry season in the open ground; thorough watering, and that continued up to the time of rain, is necessary to produce a healthy growth. If this watering should not reach beyond the extremities of the roots to the moist earth, it would be of little benefit; no amount of water could be of any use to a plant if it was encased in a dry stratum of earth.

This theory gives the reason why soil thoroughly drained and sub-soiled produces so much better in a dry or wet season; it gives a constant regular conducting medium far beyond the extremities of the roots, under all conditions of the weather.

Accordingly, vines or stocks subject to mildew, should be trained from the start,

with just a sufficient number of branches placed in as vertical a position as practicable, without destroying any of the foliage, or retarding their growth by layering, pinching, or otherwise. We should cultivate the soil deeply, thoroughly, and repeatedly, especially in a very dry season.

We have now given these two extreme conditions which lead to decrease and decay; it should be the object of the cultivator to avoid either. This may be practically accomplished by the selection of a suitable location, and by the choice of vines that resist these deleterious influences.

Low, damp, rich soil favors the positive, while the opposite favors the negative.

The selection of a high situation, with a loose, porous, and calcareous soil, with pebbles and some sand intermixed, appears to be the best adapted to the healthy development of the grape, and to be exempt from the above maladies.

[The theory of Mr. Stagman is a very ingenious one, and is clearly and ably stated. The connection of electricity with heat, and the influence of these upon vegetation, will hardly be denied at this day. Still, these agents are so subtle in their nature, and so abstruse in their operation, that it requires patient investigation to deduce a theory from their action on the vegetable creation. Exception, we think, may be taken to some of Mr. Stagman's deductions, but we are not prepared at present to state them. We are much pleased with his article, and its freshness, and hope it may lead the way to further investigation. We shall be very glad to hear from him again.—Ed.]

THE TEIGNMOUTH APPLE.—SYN. VERMONT PIPPIN.

BY CHARLES DOWNING, NEWBURGH, N. Y.

ORIGIN, Vermont. Tree, vigorous, upright, and productive, and a regular bearer. **Fruit,** medium, oblate, obscurely angular. **Skin,** pale greenish yellow, often shaded with crimson in the sun, and thinly sprink-

led with greenish and light dots, somewhat raised above the surface. **Stalk,** rather short, in a large, deep cavity. **Calyx,** open, or partially closed; segments small, slightly recurved; basin large, deep,

regular. *Flesh*, whitish, tender, moderately juicy, with a mild, peculiar subacid flavor. "Very good." Ripe November to February.

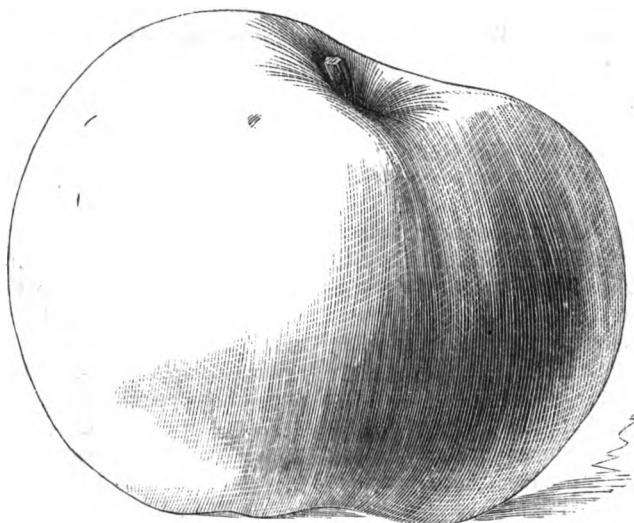


Fig. 1.—Teignmouth Apple.



Fig. 2.—Section.

[To which we can only add, that we quite agree with Mr. Downing in calling this a very good apple, and thank him for the specimens from which our portrait was made.—Ed.]

THE WILMINGTON PEAR.

BY CHARLES DOWNING, NEWBURGH, N. Y.

Fruit, medium or below, obtusely turbinate, inclined, slightly angular, somewhat oblique. *Skin*, greenish yellow, considerably netted and patched with russet, especially around the stalk and calyx, and thickly sprinkled with russet dots.

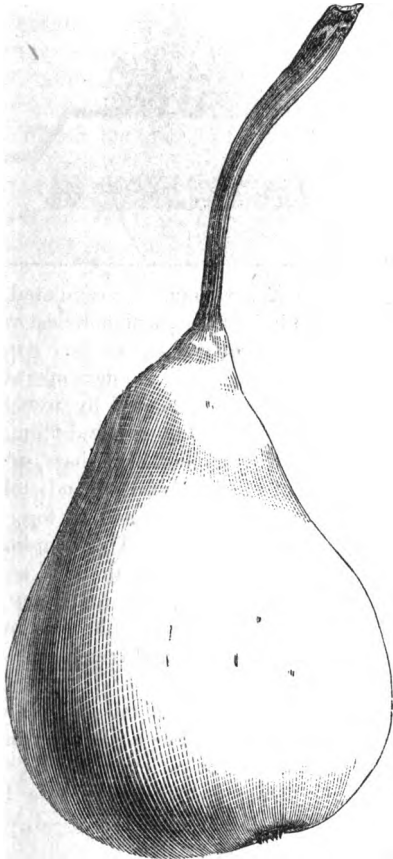


Fig. 1.—Wilmington Pear.

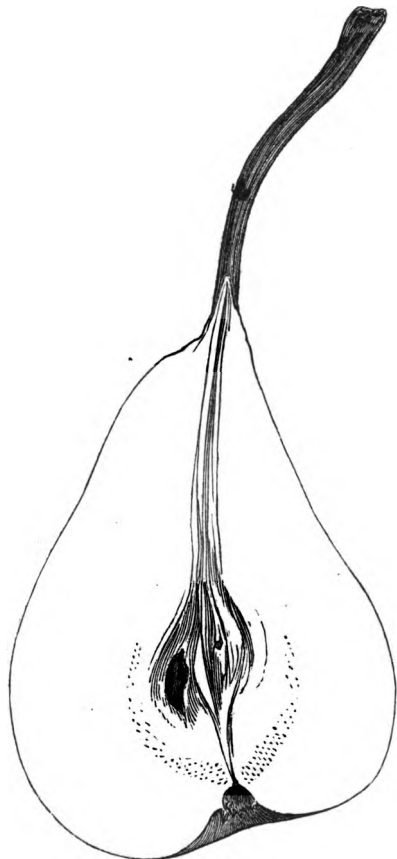


Fig. 2.—Section.

Stalk, long, generally straight, sometimes curved, much inclined, inserted in a slight depression, generally by a lip. *Calyx*, open, segments of medium length, persistent, sometimes recurved; basin rather shallow and uneven, often regular. *Flesh*, fine, whitish, very juicy, buttery, melting, with a rich, sweet, pleasant flavor, slightly aromatic. "Very good."

[Mr. Downing also sent us Dr. Brincklé's description, which does not differ materially from his or our own. Dr. Brincklé, however, sums up "best," a conclusion at which we have also arrived. It is undoubtedly a delicious pear to eat. It was raised by Dr. Brincklé from seed of the Passe Colmar, planted in 1847. It is in season in September and October.—ED.]

RAISED FLOWER BEDS.

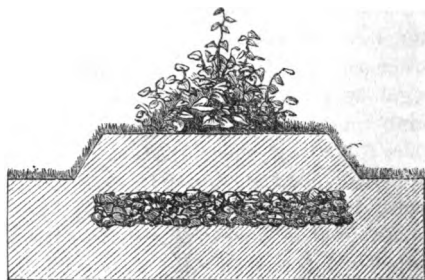
FROM THE LONDON FLORIST AND POMOLOGIST.

WE saw in a recent number of the *Florist and Pomologist* a design for a raised flower bed, which pleased us so much that we had it copied, and herewith present it to the reader. We also copy the accompanying description.

"A pleasing and attractive feature may be added to the present style of many flower gardens, where the beds are all cut out of the turf on the level surface, through having them raised 3 to 6 inches in height, according to their size, and as may be considered best suited. There is a number of them done in this way in one of the flower gardens here, which shows off the flowers to much greater advantage than those on the level. This, in addition to the design being generally admired, induces me to describe the plan to the readers of the *Florist and Pomologist*.

"For central beds, or such as might be considered desirable to give a more prominent character to in the general features of the flower garden, the raised beds will be well suited. Premising, then, that it is only to be an alteration of the beds already formed, the operation must be commenced by cutting the turf in strips with an edging-iron $2\frac{1}{2}$ feet back from the bed; then use the turving-iron, and roll back the turf as far as cut without breaking it off. Proceed next to raise the bank to the desired height and shape, allowing sufficient breadth on the top so as to be 15 inches

wide when completed; it will then appear as represented in the annexed wood-cut.



The slope of bank must be regulated according to height, and will look best when made with a pretty sharp angle. Raising the soil in the figure is the next operation, and will be easiest effected by trenching it over in good wide spaces, and filling the bottom up with stones, brick-bats, or any open sort of material at command, taking care to keep the good soil at top, and about 20 inches deep. The keeping of these grass banks may be thought an objection, but we have never found any difficulty here, by the use of the scythe, in keeping them as neat and trim as the turf on the level.

"The introduction of raised beds will, I think, assist to obviate a great sameness, as well as a want of variety and good taste in many flower gardens where the beds are wholly on the level surface."—J. WEBSTER, *Gordon Castle*.

MONUMENTS.—NO. II.

BY A PARISH MINISTER.

IN a former paper on the subject of monuments to the dead in our church-yards and cemeteries, I alluded to the inappropriateness of heathen forms and symbols among a Christian people. In our older and ruder burial places throughout the

country, the common form of these memorials is the modern head-stone; modern, inasmuch as the use of this kind of monument can not be traced back beyond a hundred, or a hundred and fifty years. The ornaments usually introduced in low relief

on these head stones, consist chiefly of cherubs, doves, scythes, and hour-glasses, mattocks and spades, skulls and cross bones.

I suppose there are persons who admire these conventional forms of ugliness, with puffy faces, which are intended as representations of one order of the holy angels. But, nevertheless, they are offenses against propriety and good taste. A sculptured angel keeping watch, as it were, over a tomb might not be an inappropriate emblem there; but cherubs, as they are commonly represented, would be much better omitted, for the work is generally so ill executed, that the ideas suggested by it are rather ludicrous than solemn.

In some places a dove with extended wings is more commonly found than cherubs at the top of the headstone; perhaps because it is a favorite nondescript of the village stone-cutter. If this is meant as symbolizing the Holy Spirit, it is evidently inappropriate, as the Christian doctrine confines His divine influences to the living, and extends them not to the dead. If it is meant as an emblem of the deceased, it must be remembered that such a symbol is unfit for even the purest and best of us.

In an English church-yard there is a ludicrous example of this ornament on the tomb of a man who had been a market gardener. The bird is represented as hovering, with out-stretched wings, the tail raised, and the head downwards. But the design was so coarsely executed that the neck resembles the stalk of a plant; the spreading tail looks like long, narrow leaves; and the oval body being marked with indentations to represent feathers, the poor man's neighbors naturally and innocently conceived that this ornament was intended for a winged pine-apple, in compliment to the gardener's professional skill.

Scythes and hour-glasses, mattocks and spades, skulls and cross-bones, being frequently intermingled, and placed in a group at the head of a tomb-stone, may be classed together, and one sentence of con-

demnation passed on them all. It is not that they are unmeaning, or that their meaning is intrinsically objectionable, or opposed to Christianity; but they are mere symbols, and by no means imposing symbols, while the grave itself, over which they stand, is a stern, awful, and impressive reality, awakening far more solemn thoughts than these mere types of mortality can do. Besides, they are altogether defective in inspiring thoughts with which the sight of the grave should always be accompanied—thoughts of that which lies beyond the grave, and of the time when death shall be swallowed up in victory. They might be appropriate enough for a heathen, but a Christian wants something more.

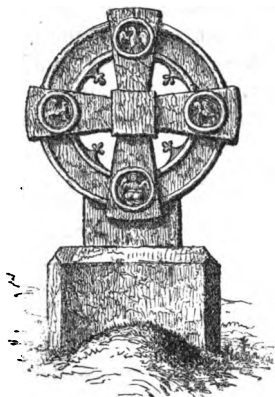
The same may be said of a still more offensive class of monumental ornaments, urns, and reversed or extinguished torches. They are both copied from pagan tombs. The extinguished torch represents that hope is at an end, and that the soul no longer exists. The urn was used to preserve the ashes into which the bodies of the dead had been consumed. It is therefore only a memorial of that abominable heathen usage. What the intended meaning of the fillets and chaplets which are sometimes copied on Christian tombs from Greek designs, may be, is beyond our knowledge.

There are other sepulchral emblems in use which are equally objectionable or absurd. But I come now to speak of one emblem which is perfectly unobjectionable, perfectly appropriate, full of solemnity, full of consolation. It lifts up our hopes, it dries our tears, it turns our mourning into gratitude. That emblem is the cross, which in some form or other, more or less conspicuously, should be exhibited on every monument and tomb-stone erected as memorials of our Christian dead.

The cross, as a symbol of the redemption, of the resurrection and eternal blessedness beyond the grave, is as old as Christianity, and its proper and reverential use must be apparent to every one. It is

the most expressive of all Christian emblems, and it should be the sign which the Christian most honors, in every place where it may be appropriately set up, and especially in the sleeping places of the dead.

We present two examples of appropriate and expressive head-stones. They need little explanation, as their symbols and proportions are obvious to even slight examination. They may be cut from marble, or from any of our most durable stones which may be preferred to marble.



The base of this head-stone should be ten inches in thickness, two feet wide, and twenty-one inches in height. The circle which supports the cross, and is itself a symbol of eternity, should have a radius of fourteen inches. The base should be firmly fixed in a heavy stone planted beneath the surface of the ground. Brown stone would be a suitable material for this monument.

The height of the next head-stone from the surface of the ground to the top of the cross should not exceed four and a half

feet. Marble or Caen stone would be proper material.



In our next paper I shall speak of inscriptions, only adding here, that they should be modest and simple, containing little more than names and dates, with, perhaps, an appropriate text of Scripture, expressive of Christian humility or hope. They should not be arrogant or boastful, and, above all, they should not "lie like an epitaph."

[There can be little doubt that some at least of our monuments and head-stones are unmeaning and in bad taste, and others so wretchedly executed as to sink into mere caricatures; but the trouble is to get something better. We are a little curious to know what our correspondent will say when he gets among the "epitaphs;" for some of them do, in virtue of some kind of necromancy inherent in them, make real saints out of the veriest sinners.—Ed.]

MARKET GARDENING.

BY A JERSEYMAN.

I HAVE been reading for a third time an article on "Market Gardening," page 182, volume for 1863, by a "Jersey Market Gardener," and am still at a loss to know

what he seeks to prove, or whether his arguments of incompetency, ignorance, and lack of capital are not just as applicable to every other pursuit in life as to that of

market gardening. It is no argument for or against any business or trade that a person may undertake it without previous training, and fail or succeed at the end of five years; for it is a well understood and accepted fact that he who has qualified himself by a long apprenticeship, and who, at the end of five years' experience as a proprietor, shall have established his business without any money accumulation whatever, has done well, and has met with success far beyond the average. There is no legitimate business or profession that can be undertaken with a sure promise of sudden wealth, and we will venture to say that the Jersey Market Gardener himself had not, at the end of five years, with all his skill and prompt business capacity, done more than establish the broad foundation to a business which has since led to his prosperity and renown.

It is a habit among successful business men, authors, &c., to dispense a good deal of gratuitous advice to the young, adverse to following the pursuits wherein they have gained their wealth and reputation; and Timothy Titcomb's advice to Mrs. Felicia Hemans Jones and the Jersey Market Gardener's advice to the readers of the *HORTICULTURIST* are about on a par. The idea of a man writing down a pursuit which has given him wealth, position, and fame, seems to be absurdly ridiculous. The advice certainly may be safe, but would not have any weight with those who think for themselves.

Now the facts about Market Gardening, in spite of the contrary opinions of one who has made a fortune in its pursuit, are simply these: that in the vicinity of large cities, and more particularly in the vicinity of New York, Market Gardening, understandingly and intelligently pursued, is one of the sure roads to wealth; and that future prospects in that business hold out the most flattering inducements. New York, as a city, at the present time, contains one million inhabitants; as a metropolis, that is, comprising its immediate suburbs, one million three hundred thou-

sand inhabitants. Taking the ratio of increase for the last forty years, and supposing that it continues the same, in fifteen years the population of New York, as a metropolis, will be fully three millions.

The value of superior land for market garden purposes ranges from \$100 to \$300 per acre; and inside of a circle of 10 miles' radius from the City Hall, a market gardener we know of, who has made a handsome competency, and is desirous to return to the father land to enjoy it, offers his acres for sale at considerably less than \$300 per acre; and this includes good buildings and quite an amount of glass, and lies on the outer edge of this circle. The market gardeners from Long Island come greater distances with their own teams. We have seen them fully fourteen miles from New York, and are well aware that this distance does not limit this class of business; in fact, it extends, in all its varied branches, fully 150 miles on all the different railroad and steamboat routes which pour their wealth and abundance into the great and growing city of New York.

What the effect of adding an average number annually of one hundred thousand persons to the consuming population of New York, will be on the business of Market Gardening, can be readily estimated by careful business men. It must show, by all fair modes of reasoning, that, judiciously and patiently pursued, it will lead to a handsome result. This the Jersey Market Gardener finally admits in his summing up, though he has not studied statistics of success in life enough to know what success is. He says: "But, like men in all other kinds of business, there is not universal success. There is not more than one-fourth of the market gardeners that have made money. Another fourth, perhaps, make a comfortable living. Another live from hand to mouth. The remainder have failed, lost their all, and left; and the cause of failure, in nine cases out of ten, has been insufficiency of capi-

tal." Now this is what we call a first-rate result. But first let us ask, what business is there in this world in which there is universal success? Three per cent. of all the mercantile world are successful at the end of only twenty years; yet twenty-five per cent. of the market gardeners make money, and twenty-five per cent. more make a comfortable living, and the richest and smartest of them all tells us it is a discouraging business. What pursuit, profession, trade, or occupation, can show fifty per cent. of their number getting a comfortable living, and half of this fifty per cent. getting rich? There is none other. The most uniformly successful men

are those who till the soil in one way or another. The question whether a capitalist, a merchant, lawyer, or business man can attend to his business in town and farm or garden profitably in the country, we propose to discuss at some future time. This article applies to those bred to the business, and who give it their personal attention. There must be stepping stones to success in all pursuits.

[It is said that "when Greek meets Greek, then comes the tug of war." It is just so when Jerseyman meets Jerseyman. We, of course, shall stand by, and see that "nobody is hurt."—Ed.]

COUNTRY SEATS.—NO. I.

BY E. H. C.

MESSRS. EDITORS:—I have examined, with a good deal of interest and pleasure, Mr. Holly's volume on Rural Architecture, recently published by the Appletons, and, with your permission, I shall make it the basis of two or three articles on the subject of country homes. It is a good omen to such as are interested in the real material progress of our country, that books treating upon this and kindred topics, find publishers and readers; for it is only by the diffusion of works of merit that the public taste can be cultivated. Mr. Holly truly says, that "our country abounds in most interesting and picturesque scenery, embracing ocean, river, lake, and mountain, easy of access, habitable and healthy; and though filled with delightful villa sites, is too frequently suffered to remain neglected and unpeopled in its choicest nooks." And this is not because there is any deficiency of wealth for the appropriation and embellishment of these choicest sites, or of a willingness to lavish wealth on country places. On the contrary, we see, every year, costly establishments, designed for summer residences, or for permanent homes, built up with as little regard for expense as for taste. The in-

creased facilities of travel and communication have brought a large extent of beautiful country within reach of our great towns, so that the time consumed in passing from business to the open country does not exceed that which is necessarily employed in reaching the more desirable localities of our cities. The deficiency is found, then, rather in the culture than in the dispositions and means of our people. And the remedy and supply for this must be provided in the dissemination of meritorious works treating upon the subjects of architecture and domestic embellishments, by means of which our people may be educated to a higher and purer taste. Mr. Holly, in his present work, has done something towards this object; and although we do not regard his effort as a decided advance upon what we had before, yet, as a contribution towards a very desirable object, we are glad to hail its appearance. We shall have occasion, as we go on, to examine his plans, and to point out what we regard as defective, as well as commendable.

In constructing country homes there are three prime conditions to be observed: 1st, Adaptation; 2d, Accommodation; 3d, Ex-

pression. By adaptation I mean not only the arrangement of the main structure as to material and form, to suit the locality and character of the grounds; but a fitness as respects the real wants of the occupants and the purposes of a country house. Nobody wants a modern country house planted down in the open country; nor should any one desire to find a refuge from the bare streets of the city in the little less bare streets of a country village.

The material used in our country houses has not been enough considered by us in building them. Timber is abundant in almost all parts of the country, and the facility with which an establishment can be built up in a few weeks, of this material, has been the main reason, we suppose, why we have so many abortions, in the shape of Grecian temples, and Gothic miniature cathedrals and castles, scattered over the land. Let it be considered, that in building our country houses, we are not simply providing for our children—we are constructing a homestead. It is for the want of this consideration that we have so few *homes* in our country, so few house associations, around and among which our deepest and purest affections are entwined. Our thin lath and plaster constructions, which rattle and tremble in every wind and leak in every rain, do not afford very good or permanent centers for these associations and affections.

We have some native woods that are durable, out of which we may build houses that will last for several generations; but with these, even, the cost of frequent repairs and painting is so great, to say nothing of the annoyances thereby entailed, that, in point of economy, wood is by no means the most desirable material. Nor is it, in any way, the most desirable. The prevailing taste in country dwellings, before Mr. Downing's time, was defective enough. A large, square, wooden house, painted intensely white, garnished with bright green Venetian blinds—standing in a contracted yard—inclosed with a red or white wooden fence, was the very beau-

ideal of a gentleman's country dwelling. We are thankful that this dispensation has passed away; and we revere the memory of Downing, and of others like him, who were instrumental in bringing in a better taste in such matters.

The first cost of a stone or brick dwelling somewhat exceeds that of wood, even in places where these materials are readily obtained. But if they are properly constructed, such buildings will need very few repairs for many years. It is often objected, on the other hand, that such buildings are damp and unwholesome. This is, undoubtedly, true of many of the old stone houses which we find scattered about the country. And it is true, because they were not properly built. When properly built, they preserve the most equal temperature at all seasons. They are warm in winter and cool in summer, and the sudden changes which affect the weather without need scarcely be felt by the delicate invalid within the walls of the stone mansion, if suitable attention is given to the simple matter of ventilation. But I need not dwell on this subject in the present paper. I shall have occasion to speak of it again, before our subject is concluded.

[The work of Mr. Holly, alluded to by our correspondent, we have reviewed in a former number of the *HORTICULTURIST*. The contrast between our country houses now and before the days of Downing is striking indeed. The improvement is not only very marked, but very great. The labors of Downing in introducing a better style and purer taste will be gratefully remembered. Nor, in this connection, should the labors of Vaux be overlooked, following, as he does, closely in the footsteps of his former associate. His work on "Country Seats," from the press of the Harpers, is, in our opinion, the best since the days of Downing. There are two parts alluded to by our correspondent which we hope he will elaborate somewhat. *stead and stone houses*.—*Ed.*]

MAY, 1864.

FRENCH DWARF PEAR TREES.

BY J. G. B.

THERE is, perhaps, no one thing where-
in Americans exhibit a greater absurdity
for foreign productions, than in the pur-
chase of dwarf pear trees. A friend pur-
chased last year on the street a hundred
of these trees. Upon inquiry, what va-
rieties, he answered me they were all *im-
ported*, and of the *best* kinds. This is but
an illustration of numerous similar cases.
It may be, and doubtless is, advantageous
frequently for the dealer to import his
trees. He is governed by the cost, as
compared with the prices here, as also the
difficulty in obtaining a needed supply and
the varieties desired. The intelligent
grower understands this whole subject;
and if he requires a few dozen or a few
hundreds of trees, he will select his va-
rieties, and purchase them of a reliable
nurseryman on our own soil. He will gen-
erally procure a better article, or at least
the trees will be in better condition.
Packed closely as foreign trees must ne-
cessarily be for exportation, they become
heated by the confinement, important limbs
broken, and they are otherwise mutilated
and injured. A new variety originating
abroad, must necessarily, be imported by
some amateur or nurseryman; and if the
market here demands them in quantities be-

fore this home supply is sufficient, enter-
prising men send out their orders, and if
to be had, procure the trees.

But it is not this necessity to which we
refer, but the idea that the tree is better
and of a good variety because it is a French
dwarf pear tree. Your dress may or may
not be better because the material was
manufactured in England, France, or Ger-
many. Your wife may insist upon having
the imported goods, and be all right in
taste and economy; but when you apply
her preference for foreign goods as a
principle to guide you in your purchase
of pear trees, you first commit an error,
and afterwards innocently boast of it. As
the season of planting is at hand, it is to
be hoped these hints will not be without
benefit.

[Among a certain class of people there
is a strange hallucination in regard to
French pear trees. They suppose that
French dwarf pears are not only a distinct
order of pears, but very much superior to
others, and it is sometimes difficult to con-
vince them that our pears and French pears
are precisely identical. This is the class
of persons referred to by B., and to such
we commend his remarks.—Ed.]

 "HOW TO BUILD A CHEAP VINERY."

BY DR. NORRIS, WILMINGTON, DEL.

A VINERY may be lean-to or span-roofed,
of any length, and may be built of wood,
brick, or stone, although, when the latter
is abundant, we think it most desirable.
Suppose a moderate sized house to be re-
quired, say a lean-to 50 by 13. Twelve
feet for the back wall and three for the
front will be suitable heights. Founda-
tions at least three feet below the surface,
and the largest stones in the bottom. The

front wall should only be one foot of stone
above the surface, the other two feet being
made up of glass sash hung on hinges to
the front wall plate frame. Iron rods should
be built in front and back walls to secure
the wall plates firmly. The mason work
may generally be done by the perch. Sev-
enty cents a perch is the working rate, the
employer finding sand and lime. The
carpenter work can be done cheapest by

contract, and for a house of the above dimensions should not be over seventy-five dollars, the contractor finding the lumber. This includes a door in one end, and a run of movable sash hung to the back wall plates to open and shut at pleasure for ventilation.

A good trellis may be made by building it and firmly bracing in each end wall an iron bar perforated with holes, through which the wires may pass. Slight iron supports in the rafters are used to steady the wire. This form of trellis will present an equal stress on both sides of the house, and prevent any disposition to swag.

Borders may be made all inside, partly inside, and partly outside, or all outside. Entire inside borders are well adapted to forcing houses. For cold vineries, where no forcing is done, partly inside and partly outside are most in favor. The entire border outside, with vines planted out and not inside, would seem only adapted to our southern latitudes. Whichever way the border is made, good drainage is indispensable. Three feet of soil to be removed and carted off, except the top spit. At the bottom all the old spalls from the building, broken brick bats, and small stones come well in play. They should be arranged so as to have a gentle descent from the back wall of the vinery. A good compost to fill up should be prepared some time previous to erecting the house, by getting old sods from a rich pasture, and suffering them to lie inverted in a heap, among which is sprinkled well decomposed stable manure, wood ashes, bone dust, leaf mould, sand, etc., and giving the whole pile an occasional turning. Now, on top of your drainage, place a row of inverted sods, then fill up from your compost heap. When the vines are planted, have at hand a barrow of leaf mould, with which to surround the fine fibrous roots.

No graperies should be without a heating apparatus. Although some of the finest specimens have been produced without any fire heat, yet there is too much risk; and the cost of a heater may be made so

small, that no one building a graperies will begrudge it. Hot water apparatus is the best, but most costly, besides requiring a fireman to manage. The old-fashioned brick flue is as good as any, although an air-tight stove will answer very well in a small house.

The unsightliness of the flue may be remedied by putting it entirely beneath the ground, directly under the walk if liked. The old Black Hamburgh should be the main dependence in the cold vinery. It will bear more exposure than almost any of the other foreigners. A vine or two of the Frontignans will not be out of place. They will mature considerably earlier than the Hamburghs. For late varieties, select West Saint Peter's. The Barbarossa, although prominent among the late keeping varieties, is said to require a longer period to mature its fruit than obtainable without an earlier start than a house without artificial heat will get. A vine of the Muscat of Alexandria may, with propriety, be introduced, although requiring more artificial heat than the other varieties to bring it to the highest perfection. It is later than the Hamburgh, and an excellent keeper.

[We are most decidedly in favor of cheap and substantial graperies; for one that is not durable is not really cheap at any price. We confess that, with all our experience, we are staggered at Dr. Norris's figures. A good house, 50 by 13, for \$75 would be cheap indeed, and place a graperies within the reach of every man who desires one. We should be glad to know that this could be done. We propose to place the Doctor's article in the hands of a number of contractors, to get estimates. We should feel obliged if some friends would do the same for us in Boston, Philadelphia, and other places; but we hope they will procure none but reliable estimates, for if they come down to the Doctor's figures, we shall accept a dozen or more of them for our friends. The materials and the work must be good

and substantial. We shall publish the estimates when received. Will you not yourself, Doctor, procure us such an estimate? —Ed.]

THE TAYLOR GRAPE.

BY S. MILLER, LEBANON, PA.

EDITOR HORTICULTURIST,—The varied accounts of this fruit, and frequent denunciations of it, compel me to defend it, as I was among the first to recommend it to the grape growers.

A graft of David Miller, near Carlisle, Penn., bore eighty handsome clean bunches the year after it was set. I have a vine when in its fourth year, from a single eye stuck into the ground in the open air, that bore last fall one bushel of fruit. That bushel made at least three gallons of wine, now worth \$4 per gallon. A wealthy wine merchant of Philadelphia, to whom I sent a bottle, wrote back, "Miller, your Taylor wine is good. Send me 1,000 vines." (He is also a vineyardist.) He took all the vines I had, and has engaged all I can grow for another year. (You see by this, Mr. Editor, I have no axe to grind.)

An M.D. of Chester County, Penn., of grape experience, writes: "When I have eaten nearly a fill of Delawares, Crevelings, &c., then I top off with a hatful of the only *real* spicy grape we have, 'the Taylor.'" The President of the Missouri Horticultural Society writes me that they all pronounced my Taylor wine among the best. I sent them a little—I knew the officers. Now I think this ought to be a little in its favor, and prevent persons who have it from rooting it out, or grafting it over as a worthless stock. It must be trained different from many others; it should have plenty to do, for if headed back as severely as most others require, it will be in such a blast at the time of blossoming, that they will be thrown off instead of setting, and will truly appear as represented in Fuller's new book.

Had Mr. Fuller seen my vine above men-

tioned, and a host of little ones not mentioned at all last spring, loaded with fruit, nice, full, compact bunches, I think he would have given the Taylor a more favorable description. While on this subject, let me impress upon your readers the importance of raising seedlings, as there are improvements yet to be made. To show what an humble individual can perform, I will state that a man in this neighborhood sold a white seedling lately for \$500, which should certainly encourage others to try their hand at it.

[Accompanying Mr. Miller's letter was a box containing two bottles, one filled with wine made from the Taylor grape; and after tasting it several times, we are compelled to say that it is a good wine; indeed, it is much better than any that we have seen made from the Isabella, Concord, or any of that class of grapes. Out of five vines sent to us for the Taylor's Bullitt, only one proved to be true, and this may have been the case with others. Under ordinary treatment it sheds its blossoms, leaving the bunches very small and thin. An expression of opinion from those who have grown it might be of benefit to the horticultural community. But, friend Miller, what about the other bottle, labeled "wine from the Clinton grape?" We had no idea that wine so transparent and ethereal could be made from the Clinton. Why, even a babe might drink a gallon of such wine without the slightest apprehension of intoxication. It is like air itself. We even tilted the bottle upside down, and yet the wine glass seemed not to gain or the bottle to lose aught of its contents! How *did* you make such wine? Is it a secret?—Ed.]

A PORTRAIT OF A GARDENER.

PAINTED BY HIMSELF.

Two years ago I addressed you for a garden place, and by your kindness I got the employment at ——. You had told me that this place was a bad one; nothing for encouragement, much hard work, and at a low remuneration. I should try it, and you promised to furnish me at a later time with a better situation, because you had always the best opportunity to accommodate such a desire of mine. I accepted that place, and found at entering that your description made of it was a true one; and more than that, the gardener was to be slighted to the lowest laborer. No wonder I felt inclined to leave directly; yet you had given me this employ; you could think me ungrateful if I left; and, besides, I believed I discovered that my employer took some interest in rural affairs. This seemed to me inducement enough to stay, and to begin my work faithfully. But I had to suffer very much: my employer, pretending to be a cultivator since twenty-five years, and not even knowing the first elements of the matter, bolded to *direct every work*, naturally enough not to any fixed plan, neither to the settled principles of practical experience, nor to the directions given in good books—in your valuable *Horticulturist* and in the *Agriculturist*—but almost in every case acting perversely with oblique alterations, *casus obliquus*. Thus, to see and to be forced to assist at such things, I suffered much. Thus it was all the time of my being there; and when I went for another season to such a miserable place, the only reason I had—I confess it to you—was, to see still more, and to collect more of the curiosities of a gentleman who pretended to be a twenty-five years' cultivator; and this motive gave me pleasure and encouragement to endure till it became quite intolerable to me, and

I left. I feel, and never felt to be angry to my employer; on the contrary, I pitied him always. He had some nice qualities, and I wish him all that wherein he may find pleasure and happiness. I relate to you the above because I feel devoted to you, and I put great confidence in you, and in your judgment, and I know that you understand me.

Now, gentlemen, I am out of employment. The last I had, by your recommendation, was a bad one. I hope and request you to give me a better place; a place at a gentleman's of means, who takes pleasure in gardening, and who allows his gardener to work according to a reasonable and agreed plan, without interruption or meddling with the gardener's affairs; where are green-house and grapery, and so many hot-beds as may be needed, and a remuneration at about \$50 per month, and a dwelling-house. Should you get on hand and willing to give me such a place in the course of the present year—I am not in a hurry this—you would much oblige, and find me grateful.

To show you, gentlemen, my sincere devotion and confidence, I offer you to read, and I will give your *Horticulturist* the preference for publishing, if you should like it, my article, "*A Gentleman and his Gardener*," in four chapters, and another little piece, "*Interview Between an Editor and his Friend*." Both these articles I have given now to be corrected; they will be found pleasing, interesting, and instructive for every reader who takes an interest in the rural affairs, and especially in gardening.

[The above is a genuine letter. It is such a life-like portrait, that it carries with it its own commentary, and is too good to be lost. The heading is our own.—Ed.]

THE COLD GRAPERY—PREPARATION OF THE BORDER.

BY THE EDITOR.

WE have a great many inquiries as to the best mode of making grape vine borders, &c., and propose to answer some of them here. It will be seen, however, that we have no patented process. After having erected a house, the next important step is to prepare a suitable border. The materials that we prefer consist of sod mould, muck, sand, and old manure, to which may be added ashes, lime, horn shavings, bone-dust, and charcoal dust, as they may be had. The body of the compost should consist of sod mould, muck, and sand in about equal proportions. Sod mould is usually obtained by taking the top spit of an old pasture lot; but in some places this can not be had, and then any ordinary good top soil may be used. Sometimes this will be sandy enough without the further addition of sand. There should be sufficient sand to make the compost light and porous. The materials above named should be thoroughly mixed together, which is best done by spreading on the ground a layer of mould three or four inches thick; on this put an inch of manure; next three inches of muck, which may be lightly sprinkled with lime; next a layer of sand, on which

sprinkle the charcoal dust, bone dust, or ashes, charcoal dust being the best, but all may be used. Now put on a layer of mould again, and proceed as before, till the heap is sufficiently large to fill the border. After a day or two the heap should be turned by cutting it down from top to bottom, which will mix the materials together in a very thorough manner. The compost will be very much improved by being turned several times at intervals of three or four days.

We have sometimes known it to be difficult to procure the materials above named, and we have then suggested the use of the best top soil that could be got, with some scrapings from the barn-yard, and the addition of enough sand to make the compost light. Several good borders have been made in this way, but not, in our opinion equal to that first described. The bone-dust usually sold in the market is not good for much, the best part of the bones having been removed before the bones were ground. The bones should be *fresh*.

We may follow this article with others, giving a list of the best vines, with directions how to plant them, &c.

NEW OR RARE PLANTS, &c.

WE have no foreign files to look at this month, and our list of new plants is consequently small. We have a few notes, however, which we here add.

LYCHNIS SENNO.—A hardy, herbaceous perennial shrub, introduced from Japan by Mr. Fortune. There are three distinct varieties, one having red flowers, another white ones, and the third red flowers with white stripes.—(*Florist and Pomologist*, iii., 73.)

GRAPES.—*Graham's Muscat Muscadine*, described as having a fine muscat flavor, equal to Chasselas Musqué, and not so lia-

ble to crack. An abundant bearer, bunches as large as Royal Muscadine, and berries as large as the Dutch Sweetwater.—*Royal Vineyard*, a late white grape. Bunches hard and well set, sometimes long and tapering, and sometimes short ovate. Berries large and roundish ovate, skin white and somewhat transparent. Flesh firm and crackling, with a fine Sweetwater flavor. This is a fine-looking grape, and received a first class certificate from the Fruit Committee of the Royal Horticultural Society.—(*Dr. Hogg's Report*.)

ARBOR VITÆ.—Mr. Brinckerhoff, of Fish-

kill Landing, has a new *Arbor Vitæ*, elsewhere described. We do not know what name he proposes to give it. It is a fine plant.

JAPAN PLANTS.—Messrs. Strong & Spoon-

er, of Brighton, Mass., send out some new Japan plants, introduced by Dr. Hull. We have not seen a list of them, but it contains *Thuja dolabrata* and *T. dolabrata variegata*, Maples, &c.

MONTHLY CALENDAR.—MAY.

THE season, as was anticipated, is so backward, that most of the observations in last month's Calendar will apply to this.

Orchard, Fruit Garden, &c.—Every thing in the way of plowing, pruning, cleaning up, &c., should be finished without delay. Grafting may be done up to the middle, or even latter part of the month, if the grafts are in good condition. On grape vines, rub off all eyes that are not wanted, and see that arms, &c., are tied in their places. The planting of vines should not be longer delayed. Provide suitable stakes when they are put in the ground, and cut to three eyes. Cuttings may still be planted in the open ground. Make new Strawberry beds, and clean up old ones. Look over fruit trees of all kinds.

The Grapery.—As soon as the vines in the *Cold Grapery* are well broken, tie them up. Keep the house rather warm and moist, and ventilate carefully. Rub off such buds as are not needed. Keep the borders loose on the surface, and free from weeds. Be careful not to sodden the borders. In the *Hot Grapery*, the first crop will now be ready to cut; too often, however, the bunches are cut when only colored, and not ripe. Other crops will be coloring, and some only just set. In these cases, attend to pinching in, thinning out, &c., as before directed. Be on the lookout for mildew at all times, and dust with lime and sulphur. Ventilate carefully, and avoid cold currents blowing on the vines.

Green-House.—It will now be time to think of putting plants out of doors, except such as are to be kept for ornamenting the house during the summer, such as *Fuchsias*, *Gloxinias*, *Achimenes*, *Begonias*,

Caladiums, &c., the latter of which ought now to be encouraged to grow by repotting, &c. For such plants as are to go out, select a sheltered place with a south-eastern or eastern exposure. Many can be turned into the flower border. Azaleas that have been retarded will keep their bloom longer by being lightly shaded.

Plants in Rooms.—During this month all room plants should be removed to the open air, and sheltered from high winds. Put some boards or coal ashes on the ground, to prevent the worms from entering the pots. Geraniums, Verbenas, and plants of similar kind may be put in the flower border. Callas may be allowed to dry up gradually, as may also *Ixias*, *Babianas*, *Lachenalias*, and similar bulbs.

Ornamental Grounds.—It is to be supposed that every thing in the way of planting, pruning, raking, &c., has been done, except, it may be, planting evergreens. Bedding plants may now be put in their places. Annuals may be used for bedding purposes, such as *Phlox*, *Candytuft*, *Alyssum*, *Ten Week Stock*, &c. Annuals may also be used freely in the borders. They are among the most beautiful of summer blooming plants, and do not receive half the attention they deserve. Dahlias may be planted up to the last of the month. They are all the better for being planted late. A few bedding plants should always be kept in reserve, to fill up any vacancies that may accidentally occur.

Vegetable Garden.—There is still much to do in this department; indeed, the succession of crops required and the battling with weeds make the whole season a very busy one. In addition to the seeds named last month, Corn, Bush Beans, Cucum-

bers, Melons, Okra, Peppers, &c., may keep up a constant supply. Read remarks now be sown. Bush Beans and Sweet of last month, which will mostly apply to Corn must be sown at short intervals to this.

EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

"THE RIGHT WAY."—This is the title of a small volume written by Jeannie Harrison, which, however, is a *nomme de plume*. It is a pleasant little story, written in a pleasant way, and will greatly interest the children, for whom it was designed. The authoress seems to have a nice appreciation of the wants of the youthful mind. The style is animated, the narrative well sustained, and the "right way" shown to be a very pleasant one to walk in. We commend the book to children, and especially those who love the Sunday School.

A NEW ARBOR VITÆ.—Some two years since we saw at Mr. Brinckerhoff's, Fish-kill Landing, a new Arbor Vitæ, which we considered so good, that we advised him to send it out. This he has at last concluded to do. In habit and general appearance it very much resembles the Siberian, but it is tinged with a bright golden yellow, which gives it a most striking and beautiful appearance. It seems to be quite as hardy as the American, and keeps its color well during the winter. We regard it as a decided acquisition, and have no doubt that it will become a great favorite in ornamental grounds.

BAY RIDGE HORTICULTURAL SOCIETY.—Under this name a club has been formed at Bay Ridge, L. I., which promises to be of great benefit to that locality. It has a specific object, and that is to improve and beautify the place; for this purpose meetings are held semi-monthly to discuss topics having a bearing on this object, reading essays, hearing lectures, &c. The character of the men interested in it is a guarantee of its usefulness and success. We have attended some of the meetings, and been delighted with the spirit and earnestness of the members. We append a list of officers:

President, Hon. Henry C. Murphy. *Vice-Presidents*, Teunis G. Bergen, John G. Bergen, William C. Langley, George T. Hope, Henry A. Kent. *Treasurer*, J. A. Perry. *Recording Secretary*, William A. Perry. *Corresponding Secretary*, B. C. Townsend.

HORTICULTURAL ASSOCIATION OF THE AMERICAN INSTITUTE.—In our last we announced the formation of this Association. On Wednesday, April 6th, its organization was completed, and officers for the ensuing year elected. The meeting was well attended, and graced by the presence of ladies. A very good feeling prevailed, and a determination was generally expressed to place the society upon a solid foundation. The parties chiefly concerned in the organization of the society are men of energy, deeply imbued with a love of horticulture, who will spare no time or labor to give it a high and permanent character. Its proceedings we shall endeavor to make room for monthly. We must not omit to mention that to Mrs. J. W. Barrow belongs the distinction of being not only the first lady

member, but also the first exhibiter, her flowers affording us an appropriate subject for remark on the formation of bouquets. We append an abstract of the proceedings furnished by the Secretary, omitting, however, our own remarks for want of room.

Horticultural Association of the American Institute.—This new Association met at the rooms of the Institute in the Cooper Union Building, on Wednesday evening, April 6, 1864, for the purpose of completing its organization.

Peter B. Mead, Editor of the *HORTICULTURIST*, called the meeting to order, and moved that Nathan C. Ely take the chair, which was unanimously adopted.

P. T. Quinn, of New Jersey, read the proceedings of the previous meetings, which were approved.

Mr. Mead, from the Committee to select a list of officers, said the Committee had attended to the duty confided to them, and had nominated for officers, gentlemen who were well known in the community as taking a deep interest in the cause of Horticulture, and who would attend the meetings of the Association, viz.:

President, B. C. Townsend, Bay Ridge, L. I. *1st Vice President*, Dr. Isaac M. Ward, Newark, N. J. *2d Vice President*, J. W. Barrow, New York. *Corresponding Secretary*, James Hogg, New York. *Recording Secretary*, John W. Chambers, Brooklyn, L. I. *Treasurer*, Isaac Bachanan, New York. *Botanist*, Professor J. W. Thurber, New York. *Entomologist*, Doctor Isaac P. Trimble, Newark, N. J.

Committees.

1. *Large Fruits*, William S. Carpenter, P. T. Quinn, Isaac M. Ward.
2. *Small Fruits*, Peter B. Mead, R. G. Pardee, Francis Brill.
3. *Plants and Flowers*, John Henderson, William J. Davidson, William Fitzpatrick.
4. *Vegetables*, Peter Henderson, Alfred Bridgeman, William Cranstoun.
5. *Floral Designs, Ferneries, &c.*, Andrew Bridgeman, James Hogg, J. W. Wood.
6. *Executive and Premium Committee*,

The Presidents, Treasurer, Chairman of Committees 1, 2, 3, 4, 5, and the Committee on Horticulture of the Institute.

The Officers and Committees were unanimously elected.

P. B. Mead presented to the Association, on behalf of Mrs. Barrow, the first bouquet; and after complimenting the lady for the taste displayed in the selection and arrangement of the flowers, took occasion to utter a protest against the usual mode of smothering flowers in paper, which he termed the strait jacket system, in which the symmetry of the leaf and flower is lost, and only an arrangement of colors preserved.

Mr. Barrow, one of the Vice-Presidents, followed. His remarks were mainly upon the financial prospects of the Society, and the importance of early making it independent as to the means required to accomplish its objects. He alluded to the Massachusetts Horticultural Society, which now had funds amounting to more than \$100,000. The Philadelphia Society had also been successful, as far as finances were concerned. [Mr. Barrow's remarks had such a marked bearing on the formation of Horticultural Societies, that we shall print them in full.—ED.]

R. G. Pardee spoke of the influence of Horticultural Societies in elevating the taste and exciting a generous rivalry among those who grow fruits and flowers. These associations are the means of combining and concentrating individual influence and effort, so that the whole may be brought to bear in the collection and diffusion of information. Every one who raises a flower, confers a benefit upon his neighbor. He had lately passed a magnificent conservatory, and the thought then occurred that its owner, instead of gratifying his own circle of intimate friends, might be the means of giving delight and instruction to immense numbers had he an organ like this Association, through which he might hold communication. He hoped this was the beginning of a new era.

Isaac P. Trimble said he had been hon-

ored by his appointment as Entomologist, but he must tell them at the outset that he was acquainted with the peculiarities of comparatively few of the 400,000 insects which are known to exist on our globe. In looking at the beautiful models of fruit which adorn these rooms, he did not see specimens of Plums, Apricots, or Nectarines. These fruits are gradually disappearing from this section of the country. No doubt many of you are aware of the cause. It is the effect of an insect called the curculio, of which it takes four to weigh a single grain, and we are cowardly letting it do as it pleases. He was asked by a gentleman what he should do to destroy the lady bug; his garden was full of them. He told him to let them alone until they had eaten all the plant lice, and then they would die of starvation. He had occasion lately to count the eggs of the Dusty Vapor Moth, and the average was four hundred, and this is nearly the average of all our moths and butterflies. Arithmetic will easily tell the story of how long we could live if any one of these was permitted to multiply without being checked. Among the insects, nearly half are feeding upon the other half; and we should have the knowledge to know which half are our friends. The birds are important aids in holding in check our insect enemies. Lately, in examining the crop of the Chick-a-dee, (Black-capped Titmouse,) one of the little creeper birds of winter, he found five of the larvæ of the apple moth, and the apple moth, next to the curculio, is the most fatal enemy of apples and pears. All animated nature is a cycle of complexity to those who do not study it, but there is a movable harmony in all things. If his friend could have killed all his lady bugs, he would soon have found his mistake. When the small birds have been shot off, noxious insects have increased fearfully.

Wm. S. Carpenter said he should fill but a small niche in this Society, but would do all in his power to make it valuable to the country. Pomology had been a subject to which he devoted many years; in

fact, it was a specialty with him. The celebrated Van Mons, of Belgium, had done much for the cause of Pomology, especially in the improvement of the pear. Mr. Knight, of England, had devoted a lifetime to the improvement of small fruit, also to the apple and pear. Such enthusiasts deserve well of their fellow-men. There are a great many fine fruits which are unknown outside the orchard in which they grow. He had picked some apples from a tree 100 years old. He had propagated trees from it, the fruit of which he sent to England, where it was preferred to the Newtown Pippin. Improvements are being continually made in the quality of our fruits. Many varieties that stood high in favor 20 years ago, have given place to the improved varieties of the present day. These Societies are of incalculable benefit to the country, as a means of encouraging and disseminating information in relation to the various improvements made.

The Chairman, Mr. Ely, spoke of the influence of flowers. Their cultivation has a moral and refining effect upon our natures. He remembered in his young days those young ladies who cultivated flowers were more refined than others. Painting and the arts have a refining influence, but the flowers have a still higher, because they lead the mind upwards to the Creator. He spoke of his country home at Norwalk, where every house and garden is adorned with flowers and shrubs. He loved the country, and passed all the spare time he had there. He never knew a man or boy but was elevated in mind by the cultivation of flowers, and one that was always ready to do a kind action by his neighbor.

A. G. Burgess said he was early advised never to look for a wife in a family who did not cultivate flowers.

P. B. Mead. [We omit our own remarks, being much crowded.—Ed.]

Mr. Nash said it was very important that correct reports of the meetings should be published in the newspapers, and urged that a competent stenographer should be employed for the purpose. This associa-

tion, as I understand it, is for the purpose of bringing forward practical Horticulturists. The remarks of such persons will be of great value, as they will be the results of experience, and not mere theories.

He said he was born and lived in the midst of an orchard of about 20 acres, and was educated in the midst of good fruit. Many of the trees would yield well for a time, but would soon become diseased. He suggested a Committee on Seeds be appointed, and recommended that an orchard should be set out where forest trees had been cut down.

Mrs. J. W. Barrow exhibited choice cut flowers.

Wm. S. Carpenter exhibited eleven varieties of apples from his own orchard, viz., Northern Spy, Newtown Pippin, Swaar, Pennock, R. I. Greening, Seek-no-further, Dominie, Baldwin, Hubbardston Nonsuch, Greenwich, Roxbury Russet.

Wm. A. Burgess, Rosevale, Roslyn, L. I., exhibited two varieties of his new seedling strawberries, viz., 4 pots of "Garibaldi," and 1 of "General Grant." The plants were in fine condition, and covered with clusters of ripe fruit.

Adolphus G. Burgess, East New York, exhibited two new varieties of variegated leaved plants, viz., *Ageratum splendens*, and *Salvia elegans*. Mr. Burgess said he was willing to offer a premium of \$15 for the best seedling Rose to be exhibited during the year 1864.

Wm. S. Carpenter moved, that when we adjourn, we adjourn to meet on the 1st Monday in May. Carried.

On motion, it was Resolved, that "Flowers" be the subject for discussion at the next meeting. Carried.

Mr. John Henderson was appointed to open the discussion.

On motion, it was Resolved, that the Ladies and others be invited to send written communications. Adjourned.

JOHN W. CHAMBERS, Rec. Sec.

work very neatly bound. We have read it with no little interest. The system adopted by Mr. Fuller is that of horizontal arms, with which our readers are by this time pretty familiar. The directions are briefly and plainly given, and finely illustrated. The concluding chapters are the least valuable portion of the book. Mr. Fuller's criticisms are by no means felicitous, being wanting in discrimination, one of the first elements of sound criticism. Some of the systems condemned by Mr. Fuller have for many years been practiced in this country by different individuals, and are not without their merits, though no particular favorites with us. Mr. Knox will no doubt be surprised to see the system that he has adopted, condemned in unmeasured terms. Mr. Fuller's weakness is a morbid desire to "hit somebody." It makes him unamiable and unjust when he, perhaps, does not mean to be so. The recoil of the blow is often more damaging to himself than to the party aimed at. He might, for example, have spared Guyot, whom he evidently does not comprehend. Notwithstanding these faults, and some anachronisms and historical errors, the book is a useful one, and may be read with profit. Mr. Fuller, we believe, is his own publisher.

WORCESTER COUNTY (Mass.) HORTICULTURAL SOCIETY.—We are glad to know that our friends in Worcester have learned that a Horticultural Society has other duties to perform besides holding shows. At a recent meeting, after a pretty full discussion, the following lists of fruit were adopted as being the best for that particular locality. The list will be useful to others living there who were not present. It is proposed to add other kinds of fruit at future meetings. Some very interesting remarks in the *Transcript* we will try to make room for hereafter, with thanks to the friend who was so kind as to send them.

APPLES.

Early.—Red Astrachan, Sweet Boug

FULLER'S GRAPE CULTURIST.—We are indebted to the author for a copy of this

Duchess of Oldenburg, Williams, *Worcester Spy, *Summer Pippin.

Autumn.—Gravenstein, Porter, *Shepard's Sweeting, *Leland's Spice, *Fameuse, Hubbardston Nonesuch.

Winter and Spring.—Mother, R. I. Greening, †Yellow Belleflower, †Jewett's Red, Baldwin, *Washington Royal, *Ladies' Sweeting, *Northern Spy, Talman Sweeting, Roxbury Russet.

PEARS.

Early.—Beurré Giffard, Rostiezer, Dearborn's Seedling, Bartlett, St. Ghislain.

Autumn.—Belle Lucrative, Paradise d'Automne, Flemish Beauty, Marie Louise, Louise Bonne de Jersey, Seckel, Fulton, Henry IV., Sheldon.

CHERRIES.

May Duke, Knight's Early Black, Black Tartarean, Black Eagle, Downer's Late, American Amber.

GRAPES.

Hartford Prolific, Diana, Concord, Delaware.

STRAWBERRIES.

Hovey's Seedling, Jenny's Seedling, Jenny Lind, Wilson's Albany.

SANITARY FAIRS.—We have received circulars announcing the holding of Sanitary Fairs in various parts of the country, from which it may be concluded that the sympathies of our people are fully aroused for our suffering brave ones. The *St. Louis Fair* will embrace a large portion of the Valley of the Mississippi. In the month of June the *Philadelphia Sanitary Fair* will be held, for which preparations are being made on an extensive scale. On the first of June the *Pittsburgh (Pa.) Sanitary Fair* will be held. In Baltimore one is now in progress, and in other parts of the country preparations are being made for still more. We appeal to Horticulturists to send to these fairs liberally of their stores. The fact of your having given something to this noble cause, will be talked of proudly by your children long after you are dead. At the time of writing, the receipts of the New York Fair have reached nearly one million of dollars. There is no doubt that it will exceed that sum at the close. We look for correspondingly great results in Pennsylvania and the Mississippi valley, and wherever such fairs are hereafter held.

Correspondence.

FRIEND MEAD,—Permit me to occupy a little space in the Horticulturist with a few queries, answers to which may interest more than a few of your readers. I have a young orchard so infested with the apple-tree bores, as to cause me to replace about half the trees within the last six years, notwithstanding my efforts to destroy the pests with my knife. I have taken a dozen from one tree four inches in diameter at the base, which leaves it badly scarified, though the worms were yet small. Last spring I applied a few forkfuls of unfermented hog manure to each tree, piling it around the trunk, but without any appa-

rent benefit. Now I would ask, whether a piece of strong brown paper, immersed in whale oil or kerosene, and bound loosely around the tree with woolen yarn or some such elastic bandage, and the earth drawn up to secure the lower edge of it, would be likely to injure the tree, or to keep off the insect. 2d. By pinching, scalding, drowning, and burying the rose-bugs until the grapes on my vines were about the size of small shot, I managed to save them last year, but to be disappointed of the pleasure of eating ripe grapes, Isabellas at least. My Concords ripened well. My vines have a warm exposure, and a grav-

* Varieties recommended as "promising well."

† Varieties recommended for "amateur cultivation."

elly loam soil, are tolerably well cultivated, but will not ripen their fruit. I notice that mulching is much recommended, which, during the dry, hot season, seems to me a judicious practice; but would it not facilitate the ripening to remove the mulch when the weather becomes cool, and, instead, give a light top-dressing of charcoal dust, peat, or some dark colored substance, to intensify the solar heat?

Another of my failures has been with asparagus; and as I esteem it one of the luxuries of the well-supplied board, I would be pleased to learn how it can be successfully grown, the kind of soil best adapted to it, the depth the roots should be planted, &c., Very respectfully, S. H. Plattekill, 4th Month, 1864.

[Your plan of cutting out the borer is a good one, but must be perseveringly done, and the borer looked after twice a year at least. A *preventive* would be not only a blessing, but better than a *cure*. The common soap-fat of the kitchen, smeared around the trunk of the tree at its junction with the ground, and for a foot above it, will be found a pretty good preventive; notwithstanding, the borer will sometimes enter above the point that is greased; but then he is easily seen before much damage has been done. Give this a trial. We think the paper suggested, or a piece of rag, bound round the tree, would prevent the borer from entering at the usual place, but we are inclined to believe they will enter above it sometimes; but there is this advantage in having them enter high, that they are more readily seen. We have no doubt that you will be benefited by using either the grease or the paper, and the tree will not be injured in either case. In regard to the rose bug, we are of opinion that the only way to abate this nuisance is to form "Bug Societies" for their destruction. A whole neighborhood must unite, and wage a war of extermination against them. Employ boys and girls to kill them, and pay them so much a quart for the dead bodies. In this way they can be got rid

of, and in no other, so far as we know. Your soil is good for grapes; but the Isabella and other grapes have ripened their wood imperfectly, and the fruit, consequently, has not ripened. In such cases, extra care is needed in thinning out the branches, pinching in, &c.; but even these will not avail where the vines are much affected with mildew. Mulching has its disadvantages as well as advantages. If you keep your soil loose on the surface, mulching is not needed. The top dressing you suggest would be a decided advantage. We can hardly give you full particulars here for growing Asparagus, but may say in a general way, that the best soil is a sandy loam, worked a couple of feet deep, and well enriched with old manure. The roots should be planted about three inches deep; that is, the crown should be three inches beneath the surface. The ground should be kept perfectly clean, and loose on the surface. A spade should never be used on an asparagus bed, but the surface simply forked over without injuring the crown of the plants; neither should it be trampled on in cutting the "grass," as it is called. We will try to have an article on the subject before long. By-the-by, we may as well state here, that Dr. Bertolet will respond to a former article of yours as soon as his engagements with our sick soldiers will permit him to do so. You can well excuse him while he is engaged in such a humane cause.—Ed.]

EDITOR HORTICULTURIST.—There are few articles in your interesting number for January, that the reader will peruse with more profit, or dwell upon with kindlier feelings of interest, than the manly and ingenious one on the grape, emanating from the pen of Dr. Schroeder, of Bloomington. I but echo the desire of many of your readers, and the wish of thousands all over the northwest, who, for profit or pleasure, are embarking in the cultivation of the grape, when I express the hope that others will, like the Doctor, when they give us their views and experience on this subject,

"dip their pens in their own hearts," and not like many, whose writings, obscure and speculative, go in for their reputation as scholars, rather than that of pomologists. Some Secretary of a little one-horse town Horticultural Society, who has grape vines of his own to sell, of such "approved sorts" as "King," "Perkins," "Union Village," and "Isabella;" varieties whose day of usefulness has well-nigh gone by, will often, using the awful influence of his "official position," decry, through the columns of the local paper, the merits of all other vines, and in his efforts at detraction frequently descend to abuse whoever presumes to place them in the rank of their merit. In happy contrast with all this is the unselfish communication of the Doctor; nor would I now trouble you with this one, but for the grave error into which I think the Doctor has easily and naturally fallen in relation to the fruitfulness of the Delaware. Since Mr. Campbell's first introduction of this grape to the public, its popularity has been so great, that the "peddlers" have resorted to all "stratagems" to supply the demand; cuttings from green wood, rootlets from immature layers, and feeble little slips from hot-house pots, have been eagerly purchased by many at extravagant rates; and when, after a feeble life of a few years, the vine either perfected some straggling bunches of thin filled fruit, or utterly refused to bear, their disappointment has been so great, that their faith in its merits has given way to admiration of some kind which has, like the Concord, fulfilled, to a certain extent, their expectations. That Doctor Schroeder is one of those victimized in this way, is evident from his letter. Responsible and respectable men, engaged in propagating the Delaware, owe it to themselves, and to the "cause," to discourage this manner of disseminating this fine variety, which I place *at the head of all the out-door grown grapes in North America*. Experience has taught me, with reference to this sort, to do my own propagating. My five-year old vines averaged this sum-

mer forty pounds of perfectly matured and ripened grapes, and while my Concords sold for 12½ cents per pound, the Delawares brought me 50 cents per pound. This past summer I have tramped around much, and seen well-nigh all the new varieties of grape. The Adirondac is, in my opinion, only a fair grape, inferior to both the Diana and Rebecca, and would never have taken the premium at Cleveland over the Catawba had not the committee, from long familiarity with the last, rather underrated its excellence in favor of the untried new comer. There are many of the older varieties superior to the Adirondac; but as comparisons are odious, and I have no interests to subserve, never having sold a vine in my life, though yearly giving away many, and only anxious to see justice done to all, will not push them further, but close, with a cordial invitation to you, Mr. Editor, to give me a call when you pass this way next summer. I want you to see my hybridized seedlings; they will interest you; though, in point of quality, they are inferior, yet some of them seem to improve a little with age, and I am not without hopes that one or two may yet prove worthy of a name.

Respectfully yours, JAS. T. DURANT.
Chicago, January, 1864.

[The Doctor is a hearty, enthusiastic man, and speaks without circumlocution. We hope he will be more fortunate with the Delaware this time. The judges at Cleveland stated that they gave the premium to the Adirondac because Catawbas were not ripe, and not because they thought the Adirondac the best flavored grape. We shall esteem it a great pleasure to call upon you when we go west.—Ed.]

EDITOR HORTICULTURIST,—As relating to your article on "Growing Plants in Rooms," I wish to say that, four years ago, I inclosed a piazza, facing the south, in front of the sitting-room, making a room for plants fourteen feet long and three feet wide. The two features in the construc-

tion of this, which add, I think, very greatly to its success, (and it *has* proved a *perfect* success,) are, 1st, thick sashes, which have two frames of glass throughout, on the inside and on the outside of the sashes, allowing three quarters of an inch between the panes, answering the purpose of a double sash; 2d, a double floor, filled in between with six inches of dried sawdust. These sashes are suspended by weights, which allows, of course, any ventilation desired, while the windows, two of them, letting into the sitting-room, make it a very easy matter to let in all the heat which may be wanted.

It often surprises me, but there are very few days during winter that I have to let in heat from the sitting room during the day. At night I usually open the sitting-room windows, or the top of one and the bottom of the other, and this is all the trouble I have in keeping the plants properly cared for, as far as heat is concerned, except such terrible weather as we had January 1st, 1864, and the like, when I moved the plants into the sitting-room.

The floor of this little place is covered with oil-cloth carpet, and the plants are showered without trouble. Camellias, Pelargoniums, &c., flourish with me, and I would not be without it. So you see I endorse all you say about "inclosing a Bay Window."

I am yours very truly, J. W.

Detroit, Mich., April, 1864.

[We are happy to hear of your success, for it will encourage others to put their piazzas to a similar use, and give them something almost as good as a green-house. The sashes could be so arranged as to be taken out in summer, if thought desirable, and thus make the piazza a pleasant place of resort during the whole year. A hot-air register might be made to open on the piazza, or a small air-tight wood stove used in very cold weather. The air could be kept moist by placing the plants on tables filled in with two or three inches of clean sand, the latter to be kept wet. The plan is worth thinking of.—Ed.]

121 WAVERLY PLACE, N. Y., Feb., 1864.

TO THE EDITOR OF THE HORTICULTURIST:

Dear Sir,—A few days since I had occasion to visit the propagating establishment of J. F. Deliot & Co., near Sing Sing. My attention was attracted to the peculiar structure of the material furnished from a bog-swamp, with which (in connection with sand) they so successfully produce their vines, giving them a vigorous and well-matured wood, and unequaled fibrous and well-ripened roots. The deposit appears to be almost wholly decomposed, or rather *decayed*, woody material, reduced by a new process to the condition of *humus*, or what might perhaps be very properly designated as *vegetable earth*, still retaining even the form and trace of the original growth of timber, which seems to have been of large size.

This material, although exhibiting evidence of comparatively recent formation, seems exactly adapted to their use, by simply shoveling it into piles, and allowing it thus to remain from summer or early autumn, until wanted the next season, without any other preparation or admixture except sand, and thus is unlike any other muck or peat soil that I have met with. An analysis might develop valuable facts.

Mr. Deliot also called my attention to some specimens of wine, produced from the native grape of this country, and invited me to taste and compare them with him for the purpose of making up an opinion in relation to their relative merits, and report the same by request of the donors, and which we propose now to do through your journal.

Mr. Deliot is undoubtedly a very close taster and good judge of the produce of the vine in all of its various stages, from the fruit to the condition of well-ripened wine, having been educated to the business of vine-dressing and wine-making in France, and for the past seven years exclusively devoting his energies and attention to the subject in this country. It is therefore his judgment, rather than my own, that I desire to present, although

fully concurring with him as far as my limited acquaintance with the subject enabled me to judge.

First Sample.—Concord, pure juice, produced by Geo. Husman, Herman, Mo., 1863. Color, light red; flavor, slightly foxy, with but slight point, character, or body; in short, flattish, with an acid trace after drinking.

The grapes from which it was produced said not to be fully ripe, or not quite equal to their best specimens produced.

Second Sample.—Norton's Virginia, pure juice, by Geo. Husman, Herman, Mo., 1863. Color, deep claret, slightly more brilliant and deep, and coloring the cork like claret, but without sediment.

Taste, a distinct, lively vinous, with not a disagreeable though marked acid taste left on the tongue, approaching that of claret, but ranking considerably above the generality of that class, certainly that with which we compared. Its promise is a red wine of a high order.

Third Sample.—Catawba, from J. Hart, Nyack, New York. This sample was the product of 1862, and so highly sugared, that to a cultivated wine taste it was offensively sweet; yet it possessed the brightness of the Catawba, with its peculiar flavor highly developed; color amber.

Fourth Sample.—Delaware, by J. F. Deliot, 1862; *pure juice*, but from rather imperfect grapes, and must be regarded as only a very ordinary sample; color, light amber; taste, a bright, yet soft and agreeable vinous, passing from the tongue with a peculiar and agreeable flavor, leaving no trace of undigested acid, and evincing much body and character.

In conclusion, we placed Delaware as No. 1 *White Wine*; Norton's Virginia as No. 1 *Red Wine*, over any samples yet met with.

Concord we regard as deficient in every essential constituting a first-class wine. Compared with wine made from the native wild summer grape, (of which we had a sample,) its general characteristics were strikingly similar, (except color, which

was darker,) and in quality excelling the wild to some extent.

I submit the above in the hope that it may elicit further investigations and comparison of the wine qualities of the American grape. R. H. WILLIAMS.

[We may say, in regard to the muck used by Mr. Deliot, that he gives it all the preparation that is usually called for. Muck sometimes contains salts that require special treatment; but we may say, briefly, after a pretty extensive use of it, that drying and aerating it generally fits it for the purposes of the horticulturist. We mean, of course, where it is not full of wiry roots. Your verdict on the wines is proper enough. In good time we think our Missouri friends will place the Concord very far below the Norton as a wine grape, if some of them do not already do so. We can not conceive how a *good* wine can be made from the Concord, and shall be agreeably disappointed if it is ever done. We shall not be backward to acknowledge the fact, however, when the evidence is presented. —Ed.]

PHILADELPHIA, Feb. 29, 1864.

MR. EDITOR—Can you inform me, through your "Editor's Table," of any thing that will destroy "Rose-bugs" except mechanically killing or drowning them? and do you know their origin? when the eggs are laid, and what way they can be reached before appearing on grape vines and apple trees in the perfect state? At Mount Holly, N. J., I find them a great nuisance, and, in fact, it is difficult in the neighborhood to get a crop of grapes.

Respectfully yours, WM. PROCTOR, Jr.

[We know of no certain way of killing them, except killing them *dead*. We can stupefy them, but they have more lives than a cat, and always come to. They undergo their transformation in the ground, and many may be destroyed by late fall plowing. Raise a fund, and employ children to kill them. If a neighborhood should unite in this way, the evil would soon be abated.—Ed.]

THE
HORTICULTURIST.

VOL. XIX.....JUNE, 1864.....NO. CCXVI.

Classification of Fruits.

IN a recent number of the *Gardener's Monthly* appeared some very sensible remarks by the editor on the classification of fruit. The subject has been running through our own mind for some time past, and we would say something to fix the attention of pomologists, if possible, on this important point. In common with the editor of the *Monthly*, we would do something to remove the obscurity that now surrounds the classification of fruit. Obscure it is to a most lamentable degree. The novice in fruit culture must often find himself sadly at a loss to identify his fruits; and even those well versed in pomological technicalities can not always, under present circumstances, be quite sure that the fruit described and the one before them are the same. This uncertainty arises from several causes, such as the variations in the same fruit, the mode of describing it, the period of maturity at which it is described, want of uniformity among writers, &c. Some will describe a fruit at full maturity; others, while it is still immature. Some will select the largest and finest specimen; others, any specimen that

comes to hand. Some will employ one set of terms; others, another.

In order to avoid some of these difficulties, the editor of the *Monthly* suggests that well-known forms be employed as types. For example, a pear that resembles the Bartlett in form shall be designated as Bartlett-shaped. This suggestion is a good one, though it does not meet all the difficulties of the case. The Bartlett, however, being a generally known variety, the novice, on being told that another pear is Bartlett-shaped, gets a very much better idea of it than if he is told it is "obovate pyriform," or "obtuse pyriform," or "irregularly pyriform," or "truncate conic," or "turbinate," though the pyriform is one of the easiest of all forms to recognize. The difficulties are greatly increased to the novice when we come to "obovate, inclining to conic, remotely pyriform," or "roundish, obliquely oblate, angular," or "truncate conic, pyramidal, angular," or "truncate conic, very obtuse pyriform," &c. In many such cases the description is made obscure by being overdone. There is too much of it. It would not do, of

course,* to ignore scientific description, but it might at least be made precise and clear. If the idea of types be used in addition to a brief but precise scientific description, there can be no doubt that a greater degree of clearness would be attained. If, for example, we say, "irregularly pyriform, or Bartlett-shaped," or "roundish obovate, or Bergamotte-shaped," the novice apprehends our meaning much more readily than if we say "irregularly pyriform" or "roundish obovate."

Then, again, more clearness would be attained if all writers on pomology would

agree to use the same terms and the same manner of description. Much of the obscurity complained of arises from this want of agreement. We think this is a matter that justly comes within the province of the American Pomological Society. If the Society would set forth a clear and precise mode for describing fruits, we have no doubt that all would adopt it. We commend the subject to their serious consideration. If we can be present, as we expect to, we shall bring it before the next meeting. In the mean time, we shall recur to it again, and give some illustrations.

MILDEW ON THE GRAPE-VINE.—I.

BY HORTICOLA.

A few days ago I received a very interesting letter from Mr. *L. A. Neubert*, the celebrated vine-grower at *Leipzig*, in Saxony. He commenced as an amateur, collecting as many varieties of the vine as he was able to obtain from reliable sources, and tested them critically, until he was, at last, persuaded to sell them. The King of Saxony visited his establishment repeatedly, and honored him with a gold medal for his well-conducted nursery. Mr. *Neubert* is a scientific chemist; and for this reason I attach the more weight to his experience in the treatment of the grape-vine disease.

About two years ago he expressed, in a letter to me, his belief, that what we used to call *mildew*, is nothing but the *Oidium Tuckeri*, so widely spread in the vine-growing countries of Europe. In this belief all vine-dressers share whom I have had an opportunity of seeing, and who had left Europe after that disease had broken out there. Be this as it may, I hasten to translate that part of Mr. *Neubert's* letter which relates to the *oidium*, hoping that it will be read by many with interest, and that it will be a benefit to such as wish to combat so cruel an enemy in good earnest. The letter is dated *Leipzig*, March 6, 1864. It reads:

"Now I come to a matter most important to you; it is that pernicious disease called *mildew* by you. I have struggled with it for four or five years, and have had many a sleepless night on account of the grapes lost by it. Now, however, I am confident that all the cares arising from that disease are at an end.

"I. Treatment of the vines *before* the leaves appear. Syringe them thoroughly, also the walls, posts, stakes, trellises, etc., with the following mixture. Take $8\frac{1}{2}$ ounces of common salt, 4 ounces of saltpetre, and 36 ounces of water, and add 10 drops of *Oleum Anthos* and 10 drops of *Oleum Lavendulæ* to the solution, shaking it well. Take one part of the solution, and from 100 to 120 parts of water. Immediately before using it, it must be vigorously shaken, on account of the oils, which, of course, easily separate from it.

"II. When they are in leaf. *Sprinkle them thoroughly with flour of sulphur*,

"1. As soon as the leaves begin to appear.

"2. As soon as they are in blossom.

"3. As soon as the berries are of the size of peas.

"4. As soon as they commence coloring.

"Afterwards all diseased berries are to

be removed, or the dusting with flour of sulphur is once more to be applied.

"You know, no doubt, that certain instruments for that purpose have been invented. The one is a bellows; the other, for dusting the upper surface of the leaves, is called the grape-vine torch.

"My eldest son saw, last year, in Botzen, (Tyrol,) vineyards treated with sulphur, in the greatest possible luxuriance and vigor, while others adjoining them, and not so treated, were totally affected by the disease.

"Last summer I found but a few berries showing the disease, in my vineyard."

Mr. Neubert's directions are clear and to the point. They do not differ from those of *Dubreuil* in his "Culture Perfectionnée du Vignoble," p. 173, except that he does not require the syringing before the vines are in leaf. Besides, he wants but three sprinklings with sulphur; yet, which is very important, *when the vines are perfectly dry*, in fine, calm weather; for the sulphur is much more efficacious when neither dew nor rain is on the vines, than when they are wet or even moist. The sprinkling must, therefore, be immediately repeated, should it soon rain after the application. *This has been proved beyond a doubt in France.*

In his *Cours d'Arboriculture*, published in 1857, the same author is less explicit and circumstantial than in the "Culture Perfectionnée," published in 1863. But while he maintains, in the latter work, that *powdered sulphur* is as good as flour of sulphur, he says, in the former, that flour of sulphur is very much better than pulverized sulphur.

Guyot's plan differs very much from that of *Dubreuil*. The second edition of his *Culture de la Vigne* was published in 1861.

He says on p. 16, that every year, from the 15th of April to the 30th of May, pulverized *sulphate of iron* must be thrown broadcast in the proportion of 40 kilograms to each hectare of vineyard, and among vines affected by the disease, 20 kilograms of flour of sulphur besides. On p. 151, he advises to sprinkle 20 kilograms of sulphur broadcast along the rows of the vines, and to place two grams of sulphate of iron at the base of each vine, *if the vineyard is situated in a region infested by the disease*. This is to be performed after the first hoeing or plowing.

Dubreuil asserts somewhere in his works that sprinkling the vines, during the time they are in blossom, with sulphur, prevents entirely the rot.

A French *hectare* is about *two acres*, a *kilogram* *two pounds three ounces*, and a *gram* *15½ grains*.

In another article we will describe the implements used for syringing in France.

Oleum Anthos is oil (essence) of Rosemary; *Oleum Lavendulæ* is oil (essence) of Lavender.

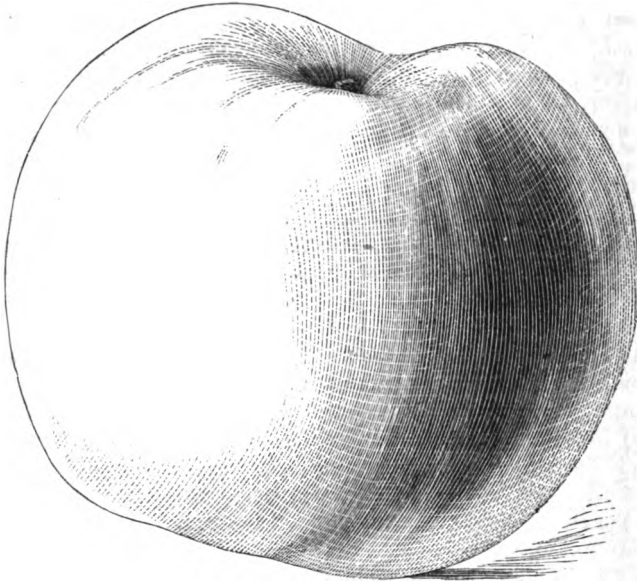
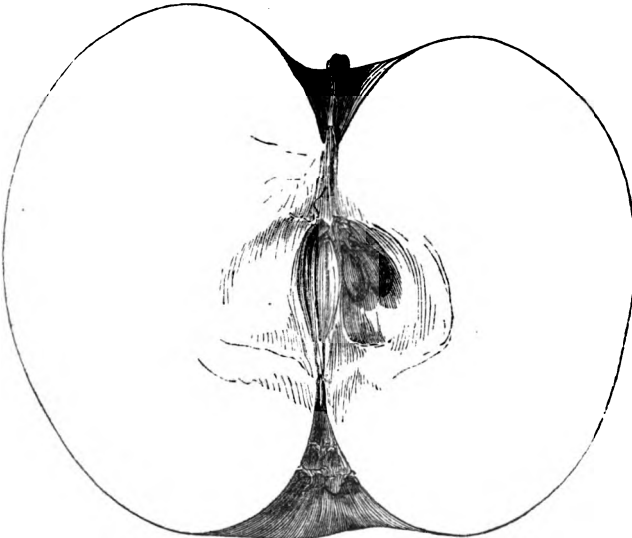
[Last month we published an article treating of the supposed causes or conditions which produce mildew. This month we publish one treating of the cure of the disease. Sulphur, as a remedy, has long been recognized. It was found, in Portugal, to be most efficacious when mixed with lime. The disease, however, when it becomes constitutional, is, in our opinion, beyond cure. The reader will notice some peculiarities in the remedy of Mr. Neubert. We hope our readers will give it a faithful trial; for Mr. Neubert's name carries much weight with it. We thank Horticola for bringing the subject before our readers.—ED.]

THE WATER APPLE.

BY CHARLES DOWNING, NEWBURGH, N. Y.

ORIGIN, Bucks Co., Penn. Tree, vigorous, wood very dark. Very productive every other year.

Fruit, medium, roundish conical, sometimes oblong conic, inclining to cylindriac, angular. *Skin*, greenish white, shaded

*Fig. 1.—Water Apple.**Fig. 2.—Section.*

- with purplish crimson in the sun, and thickly sprinkled with brown dots. *Stalk*, me-

dium or variable, slender, inserted in a narrow cavity, sometimes slightly russeted. *Calyx*, closed; segments long, slender, recurved; basin abrupt, deep, slightly corrugated. *Flesh*, white, crisp, very tender, juicy, with a refreshing, pleasant sub-acid flavor. "Very good," or "best." An

excellent amateur fruit, but probably too tender for market purposes.

[We have not seen much of this apple, but we agree with Mr. Downing that it is a very good one. The flesh is very tender. It is in season from October to December. —Ed.]

MARKET GARDENING.

BY A JERSEY MARKET GARDENER.

In your last issue I am taken sharply to task by "A Jerseyman," for my opinions in relation to "Market Gardening," given in your journal over a year ago. Why this Rip Van Winkle of a Jerseyman did not take his exceptions at the time I do not know; possibly it took him these twelve long months to prepare the ponderous arguments he uses to annihilate mine.

"A Jerseyman" is at a loss to know what I seek to prove. I do not think I presumed to *prove* any thing; I only tendered the public that "advice" through the columns of a widely-read journal, that I am too often called upon to give privately. The "advice" was intended only for such as I suppose "A Jerseyman" to be, men who are engaged in other pursuits, and who now and then see illiterate men make a small fortune in this business, and who, pluming themselves on their superior intelligence, and smattering of horticultural theories from "the books," think that *they* can easily, by engaging in the business, make a large one.

I am certain, by the style of "A Jerseyman's" communication, that he is not, nor ever has been, a market gardener, but, in case he intends to become so, (as one may judge by the high estimate he has of the business,) if he will allow me, I will again tender him a little more of that cheap commodity—advice.

He must be under 30 years of age; for much older than that few men can stand long the tear and wear necessary for the market gardener. He must ever put his

own shoulder first to the wheel, and make up his mind to rough it through heat and cold, summer and winter, for at least 15 hours a day. He must have a cash capital of not less (in present times) than \$400 per acre, for every acre he intends to till. His private expenses, for the first three years, must not exceed those of a common day laborer. Then, if he can secure a favorable site, he may succeed.

Our Jerseyman thinks it a first-rate result that 25 per cent. of all those engaged in the business make money. I do not think so, if we take into account the unusual sacrifices made to obtain it. Mechanics, who are my next neighbors, (carpenters and masons,) complain, that their business is less profitable than mine. At the same time, these knights of the hatchet and trowel, with all their assistants, come soberly to work at seven in the morning, and quit at the first stroke of the bell at six at night, no matter what their hurry may be; while we in summer, with all our force, are out at four (4) in the morning, or as soon as daylight, and leave off again only at sunset; and besides all this, Mr. Jerseyman—to our shame be it told—six days of the week even do not content us, but we must encroach on the Sabbath; for be it known to you, that the fresh vegetables that you purchase in New York for Monday's dinner, are got up early in the morning of Sunday by the market gardeners in the suburbs. The wonder then is, that, with all these sacrifices, it is not more profitable than it is.

Our Jerseyman argues that, from our in-

crease in population, market gardening, from the increased consumption of its products, must of necessity be one of the sure roads to wealth. Any one having common sense knows that there must be the same consumption of the products of shoemakers or tailors, or of butchers or bakers; then why not say that their occupations also are "sure roads to wealth." It requires but little knowledge of the science of political economy to know that the law of supply and demand will ever quickly regulate itself; and in the case of market gardeners, quicker than in many other occupations; for it does not require either skilled or educated labor to be successful in the business. Any sensible man may succeed, after twelve months' routine, if he keeps his eyes open and lays his mind to the work, being perfectly competent; hence knowledge thus easily obtained produces its legitimate results, plenty of competition. So you see, Mr. Jerseyman, if we have millions of consumers

in prospective, we have thousands of market gardeners in embryo.

Your correspondent closes with the remark, that "The question, whether a capitalist, a lawyer, merchant, or business man, can attend to his business in town and farm or garden profitably in the country, we propose to discuss at some future time." Now if he will read my article a "fourth" time—he says he has read it thrice—and ponder over it for twelve months more, it will, perhaps, begin to dawn on him that to such, and such only, I volunteered my advice; and my arguments were meant to show that they could not. I have a pretty extensive acquaintance with those engaged in the business in the vicinity of New York, and I have yet to know of the first one from among that class that has "made it pay."

[Merchants and others, who intend to turn market gardeners, will have to thank our correspondents for "both sides of the question."—Ed.]

PLANT HOUSES.—XIII.

BY THE EDITOR.

Our example this month is a plant-house of larger dimensions than any we have heretofore given. Its form was determined by its location. *Fig. 1* is a perspective.

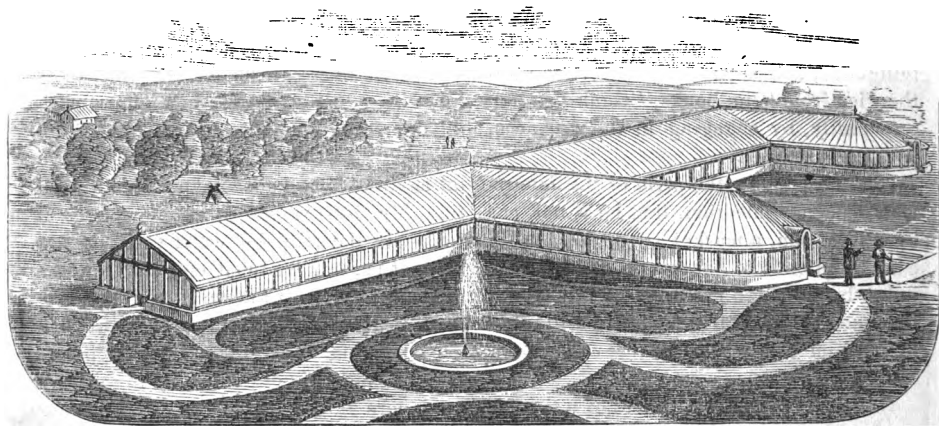


Fig. 1.—Perspective.

The principal building runs east and west. This is divided by a brick wall into two unequal parts, that facing the south being the largest, as shown in *Fig. 2*. On

the north side we have first, at the west end, a small Camellia house. It would be

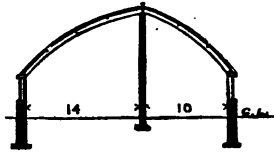


Fig. 2.—Section.

still better adapted to Orchids, or Caladiums, Begonias, &c. Next we have a mod-

erate sized bed-room for the man who attends to the boilers, one of which is in the next room. These two rooms are covered with battened boards instead of glass. On the south of these three rooms is a hot grapery, to be used as a "second" house. Next, on the east, is a house designated "Forcing House" in the plan. (See Fig. 3.) It should be "Hot House," as this room is not adapted to forcing purposes. It is intended for plants that require a high

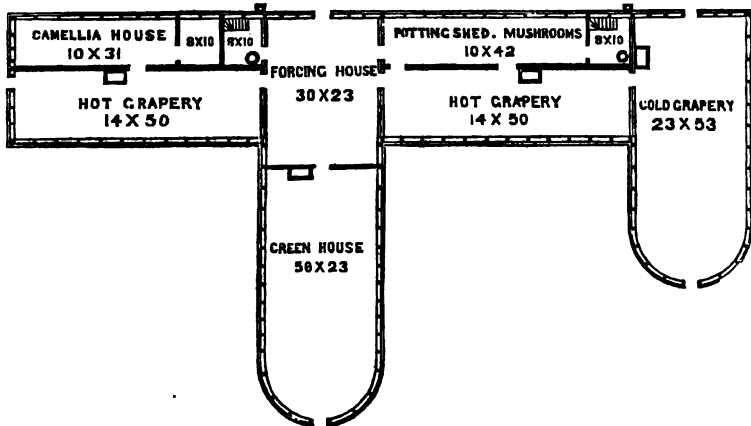


Fig. 3.—Ground Plan.

temperature to keep them in good health. East of this is a room designated "potting shed." Being covered with glass, it is well adapted to growing Mushrooms, propagating plants, &c., all the room not being needed for potting purposes. By the side of this room is another boiler room, and on the south another Hot Grapery, to be used as a "first" house. Then, on the east, is the Cold Grapery, of goodly dimensions. Last of all we have a Green-

house of large size south of the Hot-house. Thus, under one roof, we have all that is needed on a place of some size and pretension. We do not wish to be understood as saying that it is always best to put these houses in this particular shape. We certainly should not build them in this way for our own use; but where money is no particular object, and architectural effect is sought for, this form, or some modification of it, may be adopted.

THE CURRANT.

BY WILLIAM BACON, RICHMOND, MASS.

THE culture of the currant, or, rather, the planting out of currant bushes in the garden, and allowing them to stand there, has been a custom all over the country from its early history. When this labor of *setting out* was once performed, if we

take common practice as evidence, the whole work was done, and nothing remained but to gather the fruit in its season, or such portions of it as were left unconsumed by birds, and the matter went on until the next season of fruit gathering.

Planted in fresh soils, their growth was liberal enough for a few years, and the fruit was of satisfactory size. As the bushes showed an ability to take a sort of care of themselves, no pruning system was adopted, except such as was given by the browsing of animals, that in winter had the liberty of trampling the garden grounds, "because they could not do much hurt there." Indeed, even this miserable system of pruning was, thanks to the hardiness of the plants, found to be somewhat beneficial in its way, for it kept the growth restricted, thus enabling it to produce more fruit.

The row of currant bushes was usually set "by the fence" around the garden, and the roots were so closely placed that the plants formed a perfect mass of shrubbery. In winter, huge snow-drifts, in snowy regions, were found over this mass. These drifts gave a very good protection to both root and branch; but when the spring came, and they melted away, they developed a very tangled mass. Many of the shoots, from the weight that had been lying over them, were bowed to the earth, never to rise again by their own strength. Other shoots were half recumbent, and so they might be seen in all parts, in all shapes and conditions. Those which suffered most, in many instances *died out*, thus introducing a system, though not a very judicious one, of pruning. As a matter sure to follow where such a course was tolerated, the stalks grew more and more feeble, the leaves prematurely fell from them, while the fruit, from exhaustion of the stalk, diminished in size and flavor, and the old bushes were pronounced "used up." They now stood a very good chance of being abandoned to any fate that might follow. Sometimes, it was probably the case that new plantations were formed from the old; and then the new, in its turn, was left to work out for itself a similar destiny of ruin. The roots were left wholly uncared for. If the grass matted around them, it was thought of little consequence. It would have been thought a waste of ma-

nure to apply it to a currant bush, and a very great waste of time to have raked leaves and placed around them.

As fond as the masses are of currants, and as useful and necessary as they can be made in household economy, and as easily as they are grown and perfected, we are reluctant to believe that a course similar to the one we have described is tolerated by any one in the present age of fruit culture. Indeed, we would not suppose the thing possible, had we not, in our rambles a few days since, seen just such a mass of tangled material as the one we have above alluded to. We fear, then, that they may still be found too common every where. But why shall we speak of it, or try to point out a better way through the *HORTICULTURIST*? People who raise such currant bushes do not take the *HORTICULTURIST*. We know that fact as well without asking, as we should if they said so under oath. Not only the currant bushes, but every thing about the garden, testify that they do not take that paper, or any other one devoted to rural improvement. They *may* take a story paper or a political one, because the children like to read stories, &c. It is there that we find the difficulty of reaching such people, when we wish to tell them how this rough, tangled mass of ill-looking brush can be renovated and made very beautiful, and produce fruit so improved in size and flavor, that when they see it laid side by side with the old product, they would never believe that both came from the same garden, if they did not know the fact. Yet, we hope something will throw what we have to say before them, and they will try "just one bush," if no more, to see if we tell the truth.

The reader who has experience in horticulture will observe that we are not speaking now of setting out new plantations of the currant, or of their after management. The whole topic lies in the renovation of the old one; a plantation that perhaps somebody's grandfather or great-grandfather put out, away back towards "the

days of the Revolution." A precious relic of by-gone days, and one worthy to be preserved and made valuable.

The course of management is very simple, and can be soon told. The first requisites are a sharp knife, and an industrious hand to use it. With these, cut out all old and straggling shoots, and reduce the mass so that at most not more than four or five are left in what constituted what was called a bush at the time of planting. Let the shoots that are allowed to grow be young shoots, and straight, erect ones. Then, if any grass is matted around them, dig it up and destroy it. If weeds have sprung up there, annihilate them entirely. Spade or fork up the ground as best it can be done; and if manure is applied, it will pay good interest. But if manure is too valuable or too scarce, a coat of chip dung will do well, or what is better, gather up leaves from forest trees, and place them liberally around the roots. Many can do this, and accomplish the double object of getting them out of the way and into a place where they become available. The leaves are a good mulch, such as the currant loves, keeping the earth clean, light, and moist.

They in due time become a valuable natural manure to the plant. The first season an improvement in the fruit, both in its size and flavor, will be evident; but the matter must not stop so. In each successive spring the thinning-out process must be gone through with, and the mulching with leaves, the oftener the greater success. We have seen this course pursued with ample and astonishing success; and yet it is so cheap and so simple, that any one can raise improved fruit on old bushes, or bushes springing from old roots, by adopting it.

[Mr. Bacon has very truthfully described what is still too common a sight all through our farming districts. The neglect that currant bushes and other inmates of the farmer's garden meet with is not owing altogether to want of time to care for them, but to a kind of self-admitted conviction that these things can take care of themselves. They have no conception of the difference between currant bushes well-cared for and those not cared for at all. We hope Mr. Bacon's article may meet the eye of some of them, and produce its legitimate fruits.—Ed.]

TABLE DECORATION.

BY THE EDITOR.

A LATE number of the *Florist and Pomologist* (iii., p. 49) contains an article on "Table Decoration," accompanied by an illustration that we like so well that we copy it. The article is written by Mr. Fleming, and is mostly of local interest; yet there are some suggestions in it that may be of interest to us. We may state that the Royal Horticultural Society, during the past two years, has offered liberal prizes for original designs for table decoration, which has had the effect of producing some which, in our estimation, are very beautiful and chaste. We should be glad to see a similar practice inaugurated

here. Mr. Fleming, in the course of his article, says:

"It is, besides, on many tables necessary to have more than a center, according to the size of the table. We have always, in the *à la Russe* way, had five and sometimes seven plants and designs with flowers—that is, three centers and four small plants at the corners to balance. Now I think, as the March type is evidently exhausted, it would have been a wise regulation if the Horticultural Society had made arrangements to have a few small separate tables for the first prize, to be ornamented with five or seven, as the exhibitor might

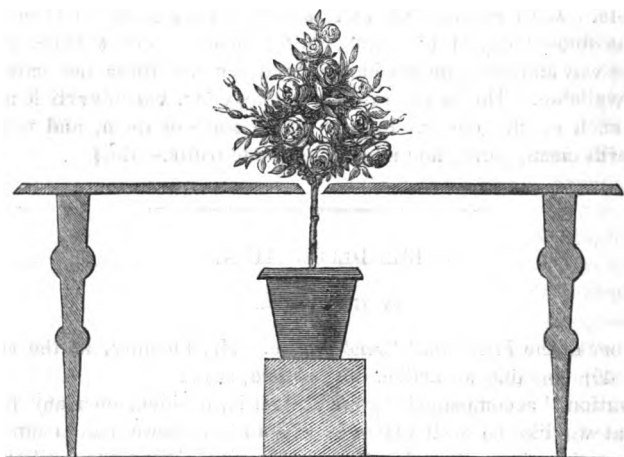
think proper. There is also one consideration that has been overlooked in this—the tables should be the same height as an ordinary dining-table, and the judges should be seated in judging; for, although one design may look well when looked down upon from a standing point of view, its appearance is very poor when seen by the parties seated at a dining-table. The March vase is not free from this fault, although its lightness prevents any obstruction to the sight; yet the principal parts of the flowers in the top tier are not seen, particularly in the clumsy imitations now made and sold for these, and which are mostly two feet in height, with a top tier as wide as the bottom, and the eye, in looking up, catches only the bottom and top dish.

"It is not a little surprising to find how far we are behind in this, if we compare our modern forms with the old Venetian

contrivances. None of the designs that have been exhibited come up to the old-fashioned but elegant tripod candelabra."

Mr. Fleming closes as follows, and introduces his illustration:

"To add to the interest of this subject, we find Mr. Kelk offering a prize of £10 for a handsome, well-grown plant. Here, again, if the tables were separate, the exhibitor could be allowed to use his own discretion; that is, say for the first prize, one table would still be sufficient for the arrangement of the single designs. There are only a very few plants adapted for table decoration, and among these at that season perhaps the *Azalea* is the best. Roses can only be got sufficiently perfect for this purpose with great difficulty. The most of them are besides inclined to rise, and can scarcely be trained to make suitable plants, with a good balance of bloom, sufficient for all sides. Not so with the



Azalea, and perhaps nothing tells so well in the center of a large table as a good standard."

There is a slight mistake here, for the illustration is a standard Rose, and not an *Azalea*, though we agree with Mr. Fleming that the *Azalea* is probably the best of all plants for the purpose. There are others, however, that may be used in this way very effectively, such as *Roses*, *Scar-*

let Geraniums, *Cinerarias*, *Pelargoniums*, or any plant, indeed, that can be grown with a stem and a low head, for a high plant is inadmissible on a dining table.

The illustration explains itself. Our dining tables are in two or more parts, and the pot is placed under the table where the parts meet. This, of course, leaves an open space of about an inch, which is easily filled by a piece made for the pur-

pose. A friend, on looking at the figure, wanted to know how the plant was to be got through the table-cloth. The same thing may occur to others, and with it the remedy. The table-cloth must be adapted to the purpose by the fair hands of the housewife. If the cloth is in two or three pieces, the laps can come where the plants

stand. Those who indulge in this luxury will easily find a means of overcoming this little inconvenience. In conclusion, may we not hope that some of our horticultural societies will offer inducements for the exhibition of table ornaments? We think it is a fit subject for the Massachusetts Society.

THE JAPANESE SILK WORM.

BY L. V. DOVILLIERS, NEWPORT, R. I.

DEAR SIR,—I send you an extract of some experiments made on the raising of the Japanese Silk Worm, Yara Mai, (mountain worm,) at the Bois de Boulogne, near Paris, France, being about the same temperature as that of Maryland.

The hatching began on the 22d of March, and ended on the 16th of April. The cocoons were made from the 1st to the 25th of June. The worms were fed with the common oak leaves, (*Quercus pedunculata*.)

Twelve cocoons gave, after winding, two grammes of silk, (1 gramme 15.434 grains.) They wind with as much facility as those of the mulberry tree. Their product is the same; that is, 24 or 28 pounds of cocoons yield 2 pounds of silk. The silk is not quite as brilliant, but much stronger, and a little coarser.

The raising of the Japanese Silk Worm lasts from 50 to 60 days, from their hatching to the time when they begin to spin, which lasts 8 days more. The butterfly comes out about 30 days after.

I hope that these few lines will find a place in your valuable paper, and that they may prove acceptable to your numerous readers.

[We are obliged to you for this interesting extract. It may not be known to our readers that experiments have been conducted for a couple of years past in this vicinity, but under the auspices of some French society, the subject being a worm indigenous to our western country. The worms were fed upon the leaves of *Plum* trees, about a dozen of which were inclosed in netting. The worm resembles very much, in size and appearance, that found upon the Tomato plant. In the same inclosure were a number of *Black Currant* bushes, which happened to be growing around the Plum trees. At the time we saw them, some of the worms were feeding freely on the currant bushes. We afterward learned, that the silk produced by the worms that fed on the currant was stronger than that produced by the worms that fed on the Plum, but the fiber was coarser and less lustrous. How far the experiments have proved to be satisfactory we do not know, as they have been conducted with much secrecy. In the present condition of our country, however, it may be worth while to give some attention to the subject.—Ed.]

DESIGN FOR STONE STABLE AND COACH HOUSE.

BY WOODWARD AND ATWOOD, ARCHITECTS, 37 PARK ROW, N. Y.

THIS design was erected on the Hudson, during the past year, of the beautiful rock faced stone so abundant between the Spuy-

ten Duyvil and the Highlands, and is a good example of such a building as will meet the requirements of a moderately exten-

sive establishment. It is conveniently arranged, enabling all the work to be done with the most ease, and gives thorough light and ventilation, so essential to the

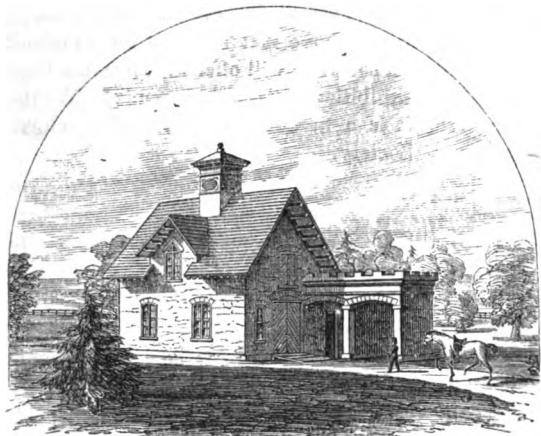


Fig. 1.—Perspective.

health and comfort of animals. The time has gone by to give prospective prices for any thing, but we have seen the day when this building might have been erected for

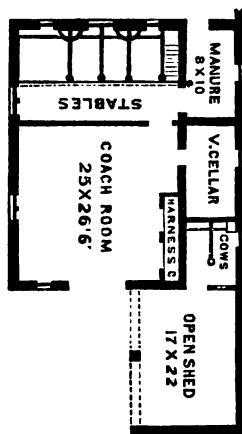


Fig. 2.—Ground Plan.

about \$4000. A room for coachman may easily be made on the second floor, and the plan increased or decreased to suit the wants of any one.

PLUM KNOT.

BY T. T. S., N. Y.

I LOOK with great anxiety on the rapid and wide spread of the *black knot* on the Plum. At present there are localities where this foul disease is unknown; but unless some means to stop its ravages are speedily found, the day is not far distant when this country will be deprived of one of its most valuable fruits. I think the subject is worthy of far more attention than it receives. In many sections of the country the Plum trees are hopelessly used up, while many others are quite free from it. Can not something be found to *stop*, if not to cure? Is it impossible to find out for a *certainty* what the cause is? For until we know the cause we can not apply a remedy, unless we do so by chance. Unless the question has been lately settled, it is not agreed upon by those in authority what the cause of the knot is.

Being interested in the subject, I have paid it considerable study and attention;

and for myself, I can come to but one conclusion, and that is, that the knot is caused by the sting of the Curculio. This fact I think I *know*, that seasons following those that have produced an abundance of fruit free from the sting of the Curculio, have always been noted for a large increase of the knot on the trees. In proof of this, I will cite one instance that has come under my notice. The spring of 1862 was late, or, rather, it was late before the earth got well warmed up, for we had a good deal of cold rain.

That season we had an abundant crop of Plums, Apricots, and Nectarines, and *entirely* free from the sting of the Curculio, a thing quite unusual with us.

The following summer, (1863,) the ravages of the black knot were greater by a hundred-fold than they had ever been before. In my own and other nurseries I had a fine chance to make observations.

Trees that were yearlings, (in the summer of 1862,) and then entirely free, were, at two years old last fall, more terribly invested with the knot than any I had ever seen before. This was true not only in my own, but in other nurseries. Trees that were coming three years old last fall, were not so badly affected; four years old still less; yearlings not at all. Some varieties more than others. Lombard was by far the worst, more than two-thirds of the trees being spoiled, and Columbia next, Monroe being about the freest. German Prune was also quite free. Not only were trees in the nursery rows examples, but garden trees. Never have so many knots been seen as during the past summer.

Now the theory I draw from all this is, that the spring of 1862 was particularly unfavorable to the early exit from the earth of the Curculio; that they did not make their appearance until after the fruit became too far advanced to sting; and that, finding itself unable to deposit its eggs in the usual manner, but still impelled by an irresistible instinct to perform the functions of its nature—to continue its kind—it seeks a substitute, and finds it in the young growing shoot of the Plum tree, seeking those kinds that grow the quickest, and therefore the softest wood, as Lombard, &c., and seeking young trees because of their greater softness, in preference to older ones, but still stinging them also to some degree. This is an accurate statement of facts as they have existed under my observation; and while they may not *prove* any thing, they may help *lead* to prove, on the part of some

one else, which is the impelling desire that has caused this statement.

I last summer tried the experiment of putting spirits of turpentine on the wound made by cutting out the black knot, and it *seemed* to prevent its reappearance, and to help heal the wound. Shall try it again to be sure.

As I fear I have already exceeded bounds, I will only say that I hope the question relating to the black knot may receive more attention than it has, and that we may soon free ourselves from the dominion of the Little Turk.

[It has not yet been settled whether the black knot is caused by an insect, or whether it is a disease of the sap. Some believe that it is caused by an insect, and that insect the Curculio. The advocates of the insect theory point to the Locust, Gall-fly, and similar insects, for confirmation; while the advocates of the sap theory affirm that the Curculio is incapable of producing any such results, and will tell you that the skin of the fruit is always more tender than the bark of the tree. It is a question, however, which any intelligentman of leisure can settle in one year's time, and it is a great pity that a few such men will not devote themselves to the task. The question is one of great importance, affecting, as it does, the successful growth of one of our most valuable fruits. If the knot is caused by the Curculio, and not some other insect, then jarring the trees is the best remedy that can be applied with our present knowledge; but the knot should always be cut out on its first appearance. We shall be glad to hear from others on this subject.—Ed.]

DOYEN DILLEN PEAR.

BY THE EDITOR.

THIS pear is not yet much known, though it can not be called a new one. The tree is a vigorous grower, and productive, and it may prove to have some merit as a mar-

ket fruit, though it comes in at a time when good pears are abundant. It is a fruit, however, that the amateur may safely add to his collection.

Fruit, medium, pyriform, with a stout russet dots. *Calyx*, small, open, in a neck. *Skin*, yellow, thickly covered with small, moderately shallow, and slightly

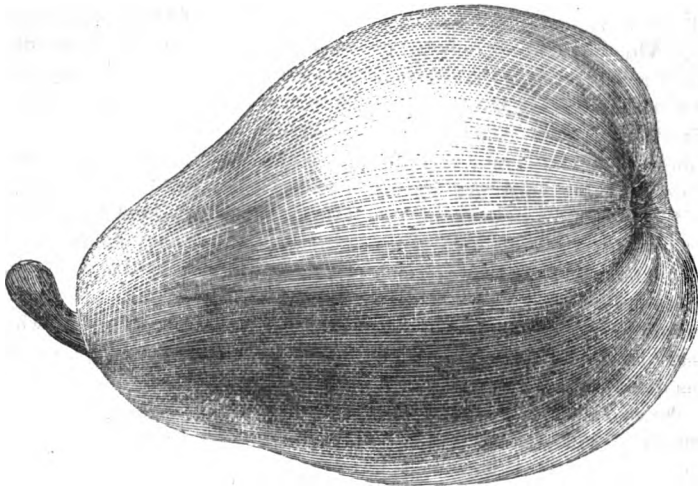


Fig. 1.—Doyen d'Eté.

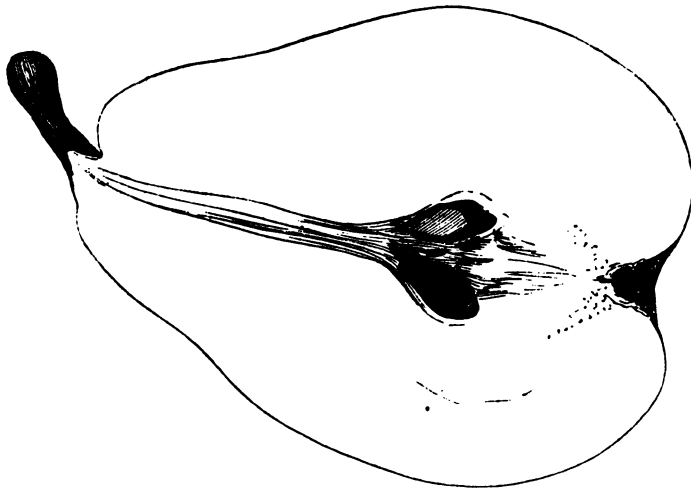


Fig. 2.—Section.

wrinkled basin, surrounded with russet; *Flesh*, melting, juicy, pleasantly sub-acid, segments short. *Stalk*, short, stout, obliquely set, with a depression on one side. *Quality*, very good. It is in season in October and November.

WAYSIDE THOUGHTS UPON ARCHITECTURE.— VI.

BY ARTIFICER.

Design.—The prevailing, uppermost it is wholly speculative; that its fruits thought of architectural design is, that grow from chance; a fancy, it may be,

fickle or fixed, without any particular adaptation of means to the end in view, or, as modernly expressed, "mere matter of taste."

Now that design is not this, but has a far higher, nobler meaning, as being analogous with nature herself, and regulated, in every department of it, by principles full of force and beauty, I shall attempt to show, as well as I can, in the course of a brief chapter or two.

We all know, doubtless, that design, in a literal sense, would embrace a vast field, not only of industrial and artistic pursuit, but provide, in one comprehensive and justly balanced range, for the sixpenny plaster cast and the nobly sculptured and painted art. Design in architecture, however, is not so general in its application, since it is represented by distinct characteristics, defining, in a measure, its extent and power, and these involve, as chief elements of design, first, *Fitness*; second, *Proportion*; third, *Beauty*. From the discovery of these, with their natural accessory qualities, we infer design, and design is perfect in proportion as their requirements are obeyed.

Aside from the charm which nature lends, Architecture is dependant for its substantive sources of power and pleasure, upon simple matter or some of its qualities. This matter comes to us in a variety of unworked forms, denominated by common acceptance, *Materials*, as earth, wood, and stone, and in some of its qualities by chemical action or comparative worth. But matter is in itself incapable of producing emotions or exciting affection in the human mind; but the moment we begin to associate the qualities of matter with other qualities, or to represent the signs of skill, utility, or convenience, and so discover the relation between the symbol and the thing symbolized, we have those elements productive of emotions, &c., and also most naturally productive of the expressions of dignity, sublimity, or beauty, and, therefore, we have fitness. Fitness, then, is the thought or intention

which adapts means to the end, and is chiefest of the elements of design.

Next to matter is the subject of form, as determined by fitness. I have stated, in a former chapter, that form in architecture is the sign or signs of skill, utility, convenience, &c., but neglected to say, farther, what has special bearing upon our subject now, that form is of four kinds or classes. First, natural or imitative; Second, simple or independent; Third, compound or dependent; and, Fourth, conventional.

Natural forms represent leaves, flowers, birds, animals, and man, and are most beautiful in which fidelity of representation is preserved.

Simple forms are those in which the character may be transferred or disposed at the architect's pleasure, so as to cause a form to assume lightness or weight, gloom or gladness, beauty or sublimity.

Compound forms, on the contrary, are designed for particular scenes or situations, which determine and fix their characters, and are most fitting where there is strict obedience to the general character.

Conventional forms are those established by the concurrent usages of a society or societies within the jurisdiction of a commonwealth or nation.

Although in forms distinguished by the elements of fitness we discover an end suggesting intuition, and, therefore, design, no perfect design is yet attained, since other natural accessory qualities expressive of it remain to be used and considered, including the other elements of proportion and beauty.

Uniformity and variety, when connected with design, are beautiful. Uniformity being also expressive of design, and variety of embellished design, it is evident they will be perfect in proportion as they express unity or congruity of form, proportion, and embellishment, or ornament.

To illustrate, suppose a wall is built and supported with columns and pillars square, polygonal, and round, separately and differently ornamented, the propor-

tions being unlike each other. It is evident, here, we should have variety, but not uniformity, and very little beauty. Now take the proportions, and reduce them all to the same unit of measure for the height; let the style of ornament be the same on all, and the forms of capital and column, if they can not be all alike, let them be equally disposed or placed in balance, as many forms on one side of the center of the subject as on the other, and so be productive of unity of design.

In buildings of any kind, for the above

reason, it is wrong to destroy their beauty or uniformity by lavishing all the wealth of design, and a large share of the purse, upon the façade or front, leaving side and rear wall naked and rough, or to place embellishment upon a front, and deny it to other and similar parts of the building. Therefore I conclude that when uniformity and variety are proportionate, or duly proportioned to each other, the beauty of their forms will be in proportion to their embellishments and unity respectively.

THE FOREIGN GRAPE IN OPAQUE HOUSES.

BY JAMES WEED, MUSCATINE, IOWA.

It has long been understood that exotic grapes can not be successfully grown in the climate of the United States, except under glass; and it may be regarded as useless to attempt their production by any other means than the employment of glazed structures.

In the early attempts to introduce their culture in this country, the causes of failure in the open air were not well understood, and it was confidently believed that protection against the severity of our winters, by laying down and covering, would insure success; but experience and observation soon recognized the effects of mildew. Whatever views may be entertained of the recent origin or development of the parasitic fungus, it is now known to be the principal drawback in their culture.

Assuming that climatic changes, occurring suddenly, and embracing great extremes, affecting the vital functions of the vine, are at least the *proximate cause* of mildew, why may not this malady be obviated by means of artificial irrigation, combined with the use of shutters in the form of movable roofs? The vines being planted in rows suited to the purpose, and the shutters composing the roofs being of substantial character, may be closed over

them for protection in winter, in cold nights in spring, and on any occasion in summer when more rain is falling than may be conducive to a perfectly healthy vine growth; and the excess of water conducted into small cisterns placed at short intervals along the ranges, from which the vines may easily have a daily sprinkling, or a substantial watering, whenever protracted dry weather may render it desirable. Is the confined atmosphere and an increased temperature over that of the open air in our bright climate, which may be attained by the use of glass, essentially necessary to prevent mildew or ripen the fruit?

If not, then the luxury of Muscats and Hamburgs may yet be enjoyed by many an industrious and enterprising ruralist who can not afford glass houses.

[It may be accepted as a fact, that the foreign vine will not thrive in the open air here, not because the vines will not stand our winters, but because they soon become so affected by mildew as to impair their vitality, and render the ripening of a crop an impossibility. No fact in grape culture has been more thoroughly tested than this. There can be as little doubt, we suppose, that mildew is primarily owing to sudden

and extreme atmospheric changes. The protection of a glass house, consequently, has become a necessity for the successful growth of the foreign grape. The questions of Mr. Weed, therefore, assume considerable importance. Our own opinion

is, that protection, such as Mr. Weed proposes, might be found, under some circumstances, to answer a good purpose. We should be glad to hear the opinion of our readers.—Ed.]

NEW OR RARE PLANTS, &c.

We glean the following from foreign publications. We hear of nothing new among home productions, except a fine Geranium and a collection of Phloxes raised by the Messrs. Cranstoun, but not yet named. We shall announce a new Strawberry in our next.

HELICHRYSUM MANNI, (Mr. Mann's Helichrysum.)—*Nat. ord.*, Compositæ. *Linn.*, Syngenesia superflua. Who does not even in his nursery days remember the "Yellow Everlasting" on the mantel-shelf? and Sir W. Hooker says that "the present noble species, if it can be retained in our gardens and increased, may revive the taste for the genus." It is a native of Fernando Po, and the Cameroon Mountains, at heights from 4,000 to 13,000 feet above the sea's level. The numerous globose flowers, each an inch in diameter, are in a large corymb; the involucre or "everlasting" part is white tinged with green.—(*Bot. Mag.*, t. 5431.)

QUAMOCLIT NATIONIS, (Mr. Nation's Quamoclit.)—*Nat. ord.*, Convolvulacæ. *Linn.*, Pentandria Monogynia. A tuberous-rooted perennial. A native of the Peruvian Cordillera. Flowers scarlet, stems run the whole length of the rafters of a greenhouse. "It may possibly bear our summers in the open air."—(*Ibid.*, t. 5432.)

SACCOLABUM HARRISONIANUM, (Mr. Harrison's Saccolabium.)—*Nat. ord.*, Orchidacæ. *Linn.*, Gynandria Monandria. Native of Pulo Penang, in the Chinese seas; imported by Messrs. Stuart & Low, of the Clapton Nursery. Flowers white.—(*Ibid.*, t. 5433.)

BEGONIA MANNI, (Mr. Mann's Begonia.) *Nat. ord.*, Begoniacæ. *Linn.*, Monœcia

Polyandria. One of the Begonias with wingless flowers. Native of Fernando Po, at an elevation of about 1300 feet. Flowers rose-colored.—(*Ibid.*, t. 5434.)

ADA AURANTIACA, (Deep-oranged-flowered Ada.)—*Nat. ord.*, Orchidacæ. *Linn.*, Gynandria Monogynia. Native of New Granada, at an elevation of 8500 feet. Flowered in January.—(*Ibid.*, t. 5435.)

BARKERIA SKINNERI SUPERBA, a cool-house Orchid.—(*Floral Mag.*, pl. 185.)

POMPON CHEYSANTHEMUMS—*Firefly*, Anemone-flowered, bright orange scarlet. *Viola*, very double, violet lilac. *Lizzie Holmes*, very double, canary-colored. All raised by Mr. Salter.—(*Ibid.*, pl. 186.)

COCOOSYPILON DISCOLOR.—*Nat. ord.*, Rubiacæ. *Linn.*, Tetrandria Monogynia. Introduced as long since as 1793, but now re-introduced to notice as a very effective plant for hanging baskets. It is so employed at Farnham Castle and Dangstein. It is a native of the temperate mountains of St. Domingo and Jamaica. Its blue, berry-like flowers are in clusters on its creeping stems. We recommend it as a basket plant, and quote the following from the "*Floral Magazine*:" "We have been supplied, through the kindness of the Bishop of Winchester, with the following directions as to its cultivation, by Mr. Lawrence, his lordship's intelligent gardener: 'It is,' writes Mr. Lawrence, 'as most of our beautiful things are, very easily cultivated. I find from experience that during the summer months it will do better in a close green-house, near the glass, and fully exposed to the light and sun's rays, than in a stove, as might be supposed from its being a native of the

West Indies ; but on the approach of autumn it requires more heat, both to bring its flowers and its beautiful ultramarine berries to perfection, the latter lasting in their brilliancy during the whole winter. It will thrive during the winter in any house where heat is used, such as a cucumber or pine-pit, or intermediate house. The propagation, also, is very easy, as it grows equally freely by seeds or cuttings. When planting it in the basket, I first line it with moss, then fill it up with an ordinary compost of loam, leaf mould, and sand ; when the plant begins to grow freely, I peg

the shoots over the surface until it is thoroughly covered ; then it will throw enough shoots over the edges to make a fine mass, otherwise it will look straggling and poor."—(*Ibid.*, pl. 187.)

HYBRID PINKS.—*Striatiflorus*, crimson flakes on rosy crimson ground. *Marie Paré*, white. *Rosette*, salmon pink.—(*Ibid.*, pl. 188.)

CHRYSANTHEMUMS.—*Prince Alfred*, pearly white tinged at the base with peach blossom. *Princess of Wales*, rosy purple. Both first-class flowers, brought out by Mr. Salter.—(*Florist and Pomologist*, ii., p. 49.)

MONTHLY CALENDAR.—JUNE.

Orchard, Fruit Garden, &c.—This is a good time to thin out fruit where it is too thickly set, especially pears. Destroy caterpillar nests in the morning or at night, when they are "at home." Fresh cut grass or clean litter may be placed around Strawberry plants, to keep the fruit clean. Cut off runners, except where they are wanted for new beds. Hoe off all suckers of Raspberries and Blackberries, except those immediately around the stool, and of these retain only three or four of the strongest. Pinch out the tops of the new canes when four or five feet high, according to the kinds. Spread out the fruiting canes; to facilitate the ripening and gathering of the fruit. Tie up Grape vines as they grow, and keep a sharp look out for the Rose Bug and Steel-blue Beetle. The last appears first, and eats up the buds as they swell. The treatment for both is the same: knock them into a basin of water, and then kill them. This is better than any kind of washes. Thin out the bunches of fruit when too thick, especially on young vines. Pinch in the laterals to a single leaf, and do it before they get large. Summer pruning or pinching may now be practiced on all fruit trees.

The Grapery.—The first crop in the *Hot Grapery* will now be mostly cut ; in some, altogether so, and water must be gradually

withheld to favor the ripening of the wood. The fruit will gain in sweetness by long hanging, but sometimes loses in flavor by being left on too long. More air may be admitted as the fruit ripens. In the *Cold Grapery* thinning out will need attention. Novices generally do not thin out enough. The size of the berries left is increased in proportion to the number removed, as a rule. Attend to pinching in laterals, and ventilate as before directed, avoiding cold currents of air. The chief care now is to prevent all sudden changes of temperature.

Green House.—There will be little to do here, most of the plants being now out of doors, where they must be carefully looked after. If Fuchsias, Caladiums, &c., are kept inside, the house should be lightly shaded.

Plants in Rooms.—The plants should now be all out of doors, as directed last month.

Ornamental Grounds.—Lawns should be frequently cut and rolled. Any bedding plants, Dahlias, &c., left over, should now be put in. The sowing of flower seeds should also be finished. The principal work will now consist in weeding, and keeping every thing neat and clean. Plants that need it should be tied to stakes, which should be concealed as much as possible by the foliage of the plants. Edgings of

Box or grass should be neatly trimmed, and new walks and roads should be frequently rolled, especially after rains.

Vegetable Garden.—Seeds of Snap Beans, Sweet Corn, Radishes, Lettuce, &c., should be sown at short intervals for a succession. Melons, Cucumbers, &c., should be put in without further delay. Keep the weeds down, and the soil mellow. It may as well be understood that we discounte-

nance the practice of drawing earth up to Peas, Beans, Corn, Potatoes, &c., and those who follow our advice will forego this practice. The thoughtful gardener will study how he may best keep up a succession of crops, and look about here and there for a vacancy to put in a few seeds, so that the ground may not be idle at any time.

EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

PLANTS, ETC., RECEIVED.—To Mr. Huntsman we are indebted for a Seedling Raspberry, and to Mr. Brill for the Lindsley Raspberry, the latter very dry after some circumambulation. We shall take good care of both these. To Mr. Clark we are also indebted for a few more plants of the Clark Raspberry, which proves to be hardy and good. These and some others we shall report on after a season's trial. To Messrs. McElwain & Brothers we are indebted for some choice flower seeds, and also to Messrs. Thorburn & Co., and A. Bridgeman. These gentlemen will please accept our thanks.

AMERICAN POMOLOGICAL SOCIETY.—We learn from President Wilder, that the tenth session of the American Pomological Society will open at Rochester on the thirteenth of September next. Held in the midst of a noted fruit-growing district, we may fairly anticipate a display of unusual interest. The numerous friends of Mr. Wilder will be glad to learn that his health is improving. We hope that, in the goodness of Providence, he may be fully re-

stored before the session opens, that we may enjoy the benefits of his wisdom and large experience.

"TEN ACRES ENOUGH."—This is the title of a work just published by James Miller, New York, which we have read with much interest. The author's business in the city being much broken up by the embarrassments which preceded the crisis of '57, he determined to gratify a long-cherished desire for rural life, and accordingly purchased ten acres between Philadelphia and New York. The present volume gives the results of his experience, and presents the proofs that ten acres, judiciously managed, are enough to afford a good living to a man who is ambitious rather to make his family comfortable than to lord it over many acres. His mistakes are as apparent as the wise application of means which gave him permanent success. The work is well written, and may be read profitably by all, but especially by those who propose to turn their attention to gardening for the first time. It will help them to determine whether they will act wisely in so doing. The au-

thor, without mentioning names, acknowledges his indebtedness to the labors of other writers; and he has thus no doubt added much to the interest and value of his own. The close of the volume would seem to invite criticism, owing to the prominence given to a certain land enterprise, which, it strikes us, is not in good taste in a work of this kind, though it may all be right. The work itself, however, is well calculated to be useful.

MERAMAC (Mo.) HORTICULTURAL SOCIETY.

—We are indebted to Secretary Muir for a list of the officers for 1864, as follows: *President*, Dr. J. B. H. Beale, Eureka P. O. *Vice-Presidents*, Wm. Harris, Allenton P. O., L. D. Votaw, Eureka P. O. *Recording Secretary and Treasurer*, Wm. Muir, Fox Creek P. O. *Corresponding Secretary and Librarian*, T. R. Allen, Allentown P. O. All of St. Louis Co., Mo.

MODEL REPORTS.—A correspondent in New Jersey writes as follows in regard to "Model Reports." His suggestions are eminently to the point. He says:

"While writing, permit me to remark that I have read with interest the 'model' reports on the new grapes, &c., but, with all due consideration, would say that those of but one writer appear to me to deserve that epithet. I allude to those of F. C. Brehm, of Waterloo, N. Y. I have found the others of small value compared with Brehm's. Let me ask you to recommend to your correspondents to give *day and date of leafing, flowering, coloring, ripening, &c., elevation of location above the sea, place of residence or of vineyard, exposure, soil, protection, drainage, geological position or composition of superficial covering, and especially, in every instance, to give the locality and name of the writer, with his Post-office address.*

"Of what use are 'model' reports if we do not know whether the writer resides in Massachusetts, Western New York, on Lake Erie, in Illinois or Missouri?

"Ask 'Pratiquer' to notice each of the

above particulars in his next report. So good an observer should give us something reliable. He tells us he is cultivating grapes in the mountains of the Hudson, latitude 41 deg. 30 min. Where? How high above the sea? The periods of flowering and ripening in connection with locality, &c., if properly studied, may lead to some useful result; but notes of ripening standing alone are like the words in a dictionary, very useful if properly associated; disjointed, useless.

REMARKS OF MR. BARROW.—The following are the remarks made by Mr. Barrow before the Horticultural Association of the American Institute. They are brief and to the point, and will interest all engaged in similar enterprises:

I will detain you only a few moments with some remarks on a dry subject; one, however, which has a direct interest for a Horticultural Association, as it is based upon that which is now, unhappily for us all, a purely vegetable production, limited in extent only by the quantity of fibers fit for the manufacture of paper, now known and yet to be discovered. The subject is Finance, its basis Mr. Chase's pets, Greenbacks.

We are engaged in establishing a society, the objects of which we all appreciate; the success of which will be useful to the science of which we are all votaries, and creditable to our city, our State, and ourselves. It ought to succeed. We have all the advantages we could desire. If we fail, our failure will be a disgrace to us; and we must therefore place failure beyond the bounds of possibility. To ensure success, however, something more is wanting besides enthusiasm for the science and a love of the beautiful.

We desire to found a lasting institution, one which shall outlive ourselves, and prove a benefit to future generations. We should aim at nothing less than the collection of the best Botanical Library on the continent, the ownership of a model Ger-

den and Glass houses, and the establishment of a Society whose approval shall be a stamp of sterling merit. How is this to be done? Not by outbursts of spasmodic enthusiasm, but by quiet, continued, prolonged, increasing efforts; by taking such measures as shall ensure us a permanent and increasing income. We must not rely upon the generosity of individuals, but upon a widespread basis of small subscriptions. We must increase our numbers to such an extent that the falling away of a few will be more than compensated by the accession of others. We must render ourselves independent, and we shall then merit the public support. All this will require much time, but it can certainly be effected. Look to what has been done at Boston, and then say whether *we* ought to fail. I have not the figures before me, but I believe that I understate the case when I say that the Massachusetts Horticultural Society is possessed of real and other property worth not less than \$100,000. Part of this is certainly the result of liberal donations and bequests, and of judicious investments; but the donations and bequests came after the Society had shown itself worthy of liberality. "Heaven helps those who help themselves."

Let independence and self-support be the watchword of this Association. We shall have scientific and practical men among us well worthy to vie with those of all other cities and countries. They will support the credit of the Association in the fields of scientific Botany and practical Horticulture. Let those among us who have not the same qualifications remember that there is work for us to do, less distinguished, but not less practically useful. It is for us to set the machine going, and to keep it steadily at work by supplying it with the necessary motive power in the shape of subscriptions. Each one of us can bring in at least one more member. Let him do so, and our numbers will soon increase in a geometrical ratio. Those who take an interest in horticultural pursuits are much more numerous than we

may think at first. Every one who occupies a respectable room may grow a flowering plant in it, and we all must know, from our own experience, that the possession of a single plant gives us the desire to collect more, and to procure all the information we can about their culture.

Finally, as a commencement of the good work, I beg leave to hand to the Secretary the names of some candidates for membership; and I trust that each one of us will consider himself a Special Committee of one on recruiting service.

DEATH OF COL. WILSON.—The death of this brave young man, who fell in the battle of the Wilderness, calls for a few remarks. He was a son of the well-known horticulturist, the late James Wilson, of Albany. His father died when he was only 15 years old; but even at that early age he managed the extensive nursery business with great ability; and when he left it, to turn the pruning hook into the sword, and battle for his country, the business was highly remunerative. At the beginning of the war, young Wilson took command of a company of the New York 43d Volunteers, but soon became Major. He was promoted for ability and good conduct, and when he fell in the battle of the Wilderness, he was acting Colonel of his regiment. Mr. Wilson was a young man of fine personal appearance and decided gallantry, and was greatly beloved by his comrades. He fell at the early age of twenty-five. Had he lived to follow his profession of horticulturist, there can be no doubt that he would have attained to a distinguished position.

HORTICULTURAL ASSOCIATION OF THE AMERICAN INSTITUTE.

THE second meeting of this Association was held at the rooms of the Institute on Wednesday evening, May 4, 1864, at 8 o'clock.

Mr. Peter B. Mead called the meeting to order; and, after a few remarks, introduced the newly elected President, Mr. B. C. Townsend, who, on taking the chair, said:

Ladies and Gentlemen,—I rise with feelings

of great embarrassment to thank you for the honor which you have seen fit to confer upon me; an honor the more highly appreciated, as it was unsolicited and unexpected. At the time of your last meeting I was out of the city, and knew nothing of your action until my return. I feel embarrassed from the consciousness of my inability to worthily fill the position to which you have elected me. You will therefore permit me to occupy it only temporarily, until another more capable of discharging its duties can be found. At the same time, allow me to say that I take a great interest in the art of horticulture, and feel mortified, as a citizen of this city, in being so long without a society like this. With the influences and advantages around us, of our Central Park, and many other public and private parks and gardens, it is not very creditable to us to be without a well-organized Horticultural Society. The salutary effect on the occupants, of embellishing the surroundings of houses, is well known, and surely those who do not cultivate a taste for this art, lose much enjoyment. It should, therefore, be our aim to awaken an interest in this matter. See the innumerable gifts of God that crowd our pathway, which he has made common to us all. Our endeavors should be to foster a love for the simple pleasures of the garden; and, as far as I am concerned, my aid shall be cheerfully given. I will not take up any more of your valuable time from the discussion of the subject for the evening, but merely tender to you again the expression of esteem and ardent good wishes.

Mr. John W. Chambers, the Recording Secretary, read the minutes of the last meeting, which were adopted.

Mr. Mead reported from the Committee appointed to prepare By-Laws for the Society, that they had not fully accomplished their labors, and on motion further time was granted to them.

Mr. Mead suggested holding a horticultural exhibition in the month of June, when a fine display of flowers, and some of the early fruits, could be had. This matter was favorably received, and, after a brief discussion, the subject was postponed for action to the next meeting.

The subject for the evening, "FLOWERS," was then taken up, when Mr. John Henderson read the following Essay:

Subject, *Flowers*. Why I proposed it. Be-

cause the culture of flowers is the highest attainment of horticulture; consequently they ought and do take precedence in all Horticultural Societies. For this reason, I considered it the most fitting subject for its first discussion; but in proposing it, I did not expect to be called upon to speak of it myself, for I am well aware there are not only among my own profession, but also among amateur florists, many more capable of doing so, more especially at this season of the year, when, so distracted with business, I have no time to think the subject over, although dwelling, as it were, among flowers. But it is a subject so intimately connected with our future existence as a society, and of so great a scope, that I trust it will afford us very many more discussions, when others more able will favor us with their views.

Flowers have been more or less connected with man from the very earliest period. Indeed, the opening chapters of the Bible inform us that when God had created man, he planted a garden in Eden, and caused to grow every tree that is pleasant to the sight and good for food, and therein he placed Adam, our first parent, thus typifying what is necessary for man's most perfect happiness. Nor has this changed in our day. Although man has so degenerated, yet, when he emerges from his sunken state, and strives to regain his original lofty nature, he does it in the garden; for here he finds in the cultivation of flowers, that true happiness which the highest honors of the world can not give him.

Let us take man in his most degenerate condition, and we shall find that, when he arrives at the highest point of civilization, it centers, as in our first parents, in a garden. For instance, the savage, when emerging from his wild state, commences with agriculture; that is, growing corn and cereals, and getting together herds of animals. Then, in order to facilitate the more easy culture of the earth, he fashions rude instruments of husbandry, thus bringing the mechanical arts into use. This very soon leads him to barter and exchange, when commerce begins, and commerce we all know by its wealth; when ambition shows itself in building splendid mansions, and adorning them with the most costly paintings, and beautiful pieces of sculpture, art and science can bestow.

When these are all obtained, horticulture

asserts its sway. He surrounds his mansion with magnificent groves of trees; he plants an orchard, and makes a vegetable garden; but yet it is not perfect. He still feels a want, and that want is only supplied by flowers. He adds these to his otherwise beautiful dwelling, and his Eden is perfect.

As I before observed, Flowers have been more or less associated with man in all ages. The ancients paid great attention to their culture. Flower markets existed in ancient Athens. India, China, and Mexico have been famous for the cultivation of flowers from the earliest periods to which their history can be accurately traced. They were in great request by the ancients at all their entertainments. They scattered them before the triumphal cars of returning conquerors. They adorned the brows of their gods with wreaths of flowers. They constituted the mystical language of poetry, and in our day, they are the testimonials of our gratitude. They add brilliancy and luster to our festivals. We present them to those whom we love. We place them on the coffins and graves of our departed friends. We use them in decorating our churches on all joyful and religious occasions. But, above all, we use them to adorn our homes; and who has not felt their softening influence on his spirits? What pleasure they afford us when placed in our dwelling rooms, and how grateful and pleasant their odor. And who is there when going to a strange house, and perhaps not knowing any of its inmates, when ushered into the parlor, has not felt a load, as it were, taken from off his shoulder, as his eyes glance on a little vase of flowers? for his heart tells him that here a genial spirit dwells. We read that the celebrated Lord Bacon, while composing his sublime philosophy, used to have a vase of fresh flowers placed on his table every day. And what is their so lovely, after the cold blasts of winter, as the flowers springing from their earthy beds. With what delight do we not welcome the Primrose and modest Violet, gently telling us of the more gorgeous flowers that are following in their steps as summer advances. But there is a pleasure attached to the culture of flowers that never tires. They soothe our mind, and cause us to forget the cares and toils of life. Many of the most celebrated men the world has ever produced, have ended their days in the quiet and happy pursuit of horticulture. And this is

easily accounted for, as flowers are ever changing, and showing us new beauties. We sow the seed, and after a few days or weeks are gratified in seeing the young plants springing from the ground, and then observing them from day to day increase and develop their growth until they arrive at perfection in blossom. Indeed, they are as it were our second children. They require constant care and attention, and that care and attention are so pleasing to us that we never tire of it.

Look at that masterpiece of painting or of sculpture. It is beautiful; it is every thing desirable as a painting or as a piece of sculpture; but it is the same to-day as yesterday, and will be years hence. But not so with flowers. They each have their season of flowering, and each year, as the returning season advances, we look forward to it with as much delight to see a particular flower as though we had never seen it before.

But let us turn for a moment to the commercial value of flowers. Few are aware how important a part the products of flowers assume in our every-day life. Whence come all the delicious perfumes of the toilet table? What would be the manufacture of pomades and soaps without the extracts from the fragrant flowers to destroy the rancid and disagreeable odors inseparable from all articles made from fatty substances? In Italy and France, in Asia and Africa, and more recently in America, thousands of acres are wholly used for the culture of flowers for their perfume. But at present France and Italy take the precedence over all other nations in this particular branch of manufacture; and in order to give you some idea of the extent to which this art is carried, I will give you the amount of flowers that one manufacturer of perfumes at Grasse, in the south of France, annually makes use of. This house alone consumes over 80,000 pounds weight of orange blossoms, 60,000 pounds of Cassia, 60,000 of Rose-flowers, 30,000 pounds of Jasmine flowers, 40,000 pounds of Violets, 30,000 pounds of Tuberose flowers, besides thousands of pounds of Lilac, Mint, Thyme, Rosemary, and other fragrant plants. In giving this estimate, you must understand it is for the flowers free from stalk, leaves, or wood; and this is the consumption of only one out of the hundreds of manufactures in France and Italy.

Have you ever been in a city noted for any

particular branch of manufacture? If so, you will have observed that every other house appears to be a factory. Chimneys are sending up their volumes of smoke. The rattling and hum of machinery surround you on every side. If you go to Grasse, in the south of France, there every one appears to be employed in the manufacture; or, rather, the art of extracting the odors from flowers. The whole town smells of flowers! Walk in the country, and almost every wagon you meet, or every peasant girl or boy, is carrying baskets of flowers to the different laboratories in the town. Indeed, the whole air is so impregnated with their fragrance, that for miles before you come to their vicinity you can smell their delicious fragrance, as it is wafted along by the breeze. But it is not my intention of here giving in detail a full statistical account of the quantities and value of flowers used for this purpose, but only to observe that the remarks I have just made are from personal knowledge, from having resided for many years in the immediate vicinity of Grasse and Nice. But this is a branch of commerce only just opening up in America; and who can foretell to what an extent it will not some day arrive at; for America possesses every degree of climate necessary for the production of flowers, the same as Italy and France. Already there are hundreds of acres under the cultivation of Lavender, Peppermint, and Wintergreen, which are extensively exported to Europe.

But I will not detain you longer on this subject, for it is of so much importance as a branch of commerce to this country, that I feel the growth of flowers in America for the manufacture of perfumes, to be a fitting subject for another discussion. I will therefore turn to the cultivation of flowers for the decoration of our dwellings, either as plants or as cut flowers. Perhaps there is no city in the world where cut flowers are so extensively used as in New York. I say this from a personal knowledge of the consumption of London and Paris, the former a city with more than double the population of New York; yet I think I am correct when I say the consumption of cut flowers for bouquets is nearly double in New York to what it is in London. And in order that you may judge somewhat of that consumption, I will give you the quantity of flowers I have myself cut for that purpose during the past season, say since September last. Of

that beautiful Carnation called *La Purité*, of which there is a specimen on the table, I have cut 50,000 blossoms; of *Bouvardia*, 30,000; of the double Chinese Primrose, 70,000; of *Tuberose*, 30,000; besides about 50,000 of other flowers, such as *Roses*, *Camellias*, *Heliotropes*, &c.; and yet I am only one of the many engaged in the cultivation of flowers for the bouquet makers of New York.

I may here observe, that although New York takes the precedence over the cities of the old world in the matter of cut flowers, it is not so in regard to plants in pots; for there the consumption is far greater than here. In the vicinity of London, almost every house has its garden belonging to it, and almost always filled with flowers. Flowering plants are also much more extensively used for the decoration of rooms, and especially for windows; a system I hope to see more extensively adopted in New York; for window gardening adds a charm even to the abode of the wealthy, and also the poor have the delight of tending a few choice plants, and of becoming acquainted with their habits and flowers. Horticultural Societies have also done much for the encouragement of the cultivation of flowers, and particularly among the humbler classes, with an evident increase of amenity within and around the dwellings, as well as an unquestionable tendency to refinement of habits and feelings. In almost all European cities there were floral markets specially devoted to the sale of plants and cut flowers. Who has not heard of the *Marché aux fleurs*, or flower markets of Paris, or of Covent Garden in London? These markets have become world renowned, solely from their being the great depots for flowers, whether grown in pots or cut for bouquets and for the table.

But let us turn for an instant to artificial flowers. It may be said, what have they to do with the present subject? I answer, very much. We are so constituted that we will have flowers at all times and seasons if possible; for what greater adornment for the person? How would a lady's hat or bonnet look without them? but as we know natural flowers would fade too soon for this purpose, art has imitated nature, and there is not a new flower, or a new shade of color introduced by the florist, but the artist in flowers is ready to imitate it; and to give you some idea of the extent to which they are used, I have only to

mention that France annually exports over \$200,000, over and above what is consumed in the country itself. Then, again, the colors of flowers. What more varied or beautifully brilliant? Art has never attained to them, but must ever be an imitator. The painter attempts to portray their brilliancy on the canvass; but how feeble the attempt. Let any one take the most beautiful painting of flowers by a Van Huisen, or a Cuyp, and let him compare the flower on the canvass with the natural one, and he will at once perceive how great a difference there is. Indeed, in many instances we have no means of describing a color except by naming the plant. For instance, the Rose, Lilac, Peach, Lavender, Violet, and many others. The manufacturer of silks for dresses or for ribbons, studies the colors of flowers, in order to imitate them as near as possible in his manufactures, so that no lady can adorn herself in the most costly dress or the most lovely ribbon, but its coloring is derived or imitated from the humble and lovely flowers.

In the year 1636 a flower mania prevailed in Holland, chiefly in reference to the Tulip, in which people speculated as in stocks and railway shares in our day. At that time a single Tulip called the *Semper Augustus*, sold for 13,000 florins, about, I believe, \$6,000. of our money, the ownership of a Tulip being often divided into shares.

Artificial means have been employed for the produce and rearing of flowers far more generally than for the cultivation of fruits and vegetables. Those who can only afford a small green-house, almost always devote it to flowers; and those who can not attain this have often favored plants under a frame or in a window of a room. I need scarcely mention what the amateur and florist have done for flowers, in the production of new ones, or the improvement given to the form and shape of old varieties. We have before us some beautiful new *Verbenas*, raised by Mr. Peter Henderson, who has become somewhat identified with this flower. There are also some pretty *Pansies* raised by myself; also a *Heliotrope*, which I call the *Belle of Jersey*; and also the *Double Chinese Primrose*, raised by me 25 years since. It will perhaps be interesting to you, sir, to see the silver medal awarded to me by the Horticultural Society of London, as I was not much more than a boy then.

In conclusion, there is one other flower I

would call your attention to. It is the *Lily*, or *Calla Æthiopica*. This is probably the flower alluded to by our Saviour, when he compared it to Solomon—Solomon, the greatest protentate the world ever knew, whose wisdom has never been equaled, living in a superb palace, surrounded and adorned by the famous hanging gardens; and yet, with all these attributes of royalty, our Lord said he was not arrayed as one of these little lilies of the field. And who can look at it without feeling the full force of the remark! What more artistically beautiful, whether we consider the chasteness of the form of the flower or its general appearance, taking blossom and foliage together. I will only further add, that flowers are so associated with us in our every day existence, that life would be monotonous without them.

On motion of Mr. R. G. Pardee, a vote of thanks was passed to Mr. Henderson, for the very interesting and instructive manner in which he treated the subject.

Mr. Isaac Buchanan exhibited a choice collection of rare flowers. Among them were several very choice *Camellias*, *Cacti*, *Rhododendrons*, an Australian plant, called the bottle washer, *Lilies*, *Lælia*, &c.

The President said that the *Rhododendron* is a plant that has been singularly neglected in this country. In England it is called the American plant, and much attention is paid to it there; yet, strange to say, we know very little of it here. It is a wonder that we have neglected such a beautiful ornament even for our city residences. It is a plant that is well adapted to stand the heat of our summers and the cold of our winters.

Mr. Buchanan said that it was an evergreen, and would grow in almost any soil; but in a stiff soil it would stand the heat better than in a light one.

Alderman Ely spoke of the profuse display of flowers that were on the tables. The massive bouquets presented by Mr. Wm. R. Prince, of Flushing, L. I., was worthy of particular notice. He called upon Mr. Mead for some remarks upon them.

Mr. Mead said that he hoped that those who had favored them with such a floral display would be present and give an account of them; but as this time of the year was their busiest season, they could not, perhaps, well attend this meeting. He would therefore, in compl.

ance with the flattering request of Alderman Ely, say something in relation to a few of them.

We have here some fine specimens of the Pansy. This plant exhibits in a peculiar manner the advancement of horticulture in this country. He well remembered when it was called the Johnny Jumper. It then stood up something like the ladies' bonnets did about a year ago. The florist has improved them very much. He had seen some that were almost perfectly round, so that, if laid upon a circle, they would exactly fit the whole circumference. In flowers of this class, the border color should be pure and distinct, and go entirely round the plant. In this respect this flower is a little imperfect. The great trouble in our country is that it is too hot and dry. The Pansy can only be brought to perfection here by artificial means, except in the early spring. If a cool place in the garden is selected, Pansies can be grown with a good deal of perfection; that is, if good seed is obtained. Good seed is hard to be got. That usually sold at the stores will give only some 15 per cent. of good flowers. He spoke somewhat doubtfully, as latterly they gave him good seeds. With good seed there was little doubt that they would yield 75 per cent. If we desire to propagate it, the best way is by cuttings. The amateur will tell you this is difficult, and can be done best by the florist, who is surrounded with all the appliances necessary. Now this is not exactly so; for here is a cutting, and if always cut in this way, there will generally be good plants. (Mr. Mead here took a slip and cut it in the proper way.) After this is done, if the plant is placed in a cool, shady part of the garden in the month of September, and covered with a newspaper, or if the plant is put into a box with some sand and a glass placed over it, it will generally take root. Mr. Buchanan would say that 49 out of 50 would be raised, with all his facilities for propagating this plant; in fact, it is the only way to perpetuate a choice kind, for we can not depend upon the seed to reproduce it. It is a great satisfaction to a person to be able to say that he raised such a plant from a cutting, and it greatly enhances his pleasure; but, notwithstanding this pleasure, it is cheaper to buy the plants from the florist. For about 25 cents we can buy such fine plants as we have here. The Pansy is a free blooming plant, and comes early into flower. I have seen flowers on them be-

fore the leaves had attained the size of a ten cent piece. This flower is not only intrinsically beautiful, but it is prized by the ladies quite as much as the Pink is by the men.

The large bouquet which we have here he supposed was made up in accordance with a suggestion that he made at a previous meeting. He took occasion then to say that our professional men made a great mistake in the formation of their bouquets; they are simply an arrangement of color, without form or good taste. He well remembered, many years ago, being on a committee with the late A. J. Downing and some ladies, at the Lyceum of Natural History, where an occasional exhibition was held. On this occasion Mr. Downing said he did not like the style in which the bouquets were put up, and the ladies entirely agreed with him; but one of the ladies picked out a bouquet which she said was well arranged. Mr. Downing looked at it, and said that it was so; and turning to another placed at the other end of the table, said, "Here is a mate to it. I wonder if it was put up by the same person." But as there was no name to either of them, we could not tell; we therefore gave to those two simple bouquets the first prize. But he had not since seen any done up in that way. He had ever since declared war upon them. What have those innocent flowers done that they should be bound together like criminals? Which is the most beautiful, this or that? (holding up examples of each.) He would always condemn this strait-jacket mode. If any exhibition is got up as suggested, he would request that a set of prizes be given for bouquets made up in the natural way, and in this manner we would do away with the strait laced style. The flowers should not be crushed together like a crowd in the street, but they should be arranged in their individual beauty, so as to be seen under as well as on the surface.

Here are some two or three kinds of the Magnolia; one of them is the *M. Soulangiana*, slightly striped; another, *M. obovata*, purple; and *M. Alexandria*, deep crimson, striped. The trees on which these grow are of the Chinese variety, and are generally of medium height, but he has seen some of our native species, *macrophylla* and others, nearly 100 feet high. The great fault with the Chinese Magnolia is, that its flowers appear before the leaves. If it could be made to flower when

the tree is in leaf, it would be magnificent; but it is very beautiful as it is.

The next flower in the bouquet is the *Mathonia aquifolia*, from the Rocky Mountains. The seeds of this plant were originally brought home by Lewis & Clark. It is a very beautiful evergreen plant. This is a double white flowering Peach from China, one of the best of recent introductions. There are also double crimson, double Rose, and double carnation striped varieties of the Peach, all of them handsome objects for the lawn. Here is a species of *Ilex*, the English holly, which is very pretty to look at, but very bad to handle, as its leaves are armed with sharp spikes. It is a splendid evergreen, but usually needs winter protection with us. This is the *Diclytra spectabilis*, sometimes called the bleeding heart, a name which he hoped would be discarded. He asked if there was any thing pleasant in the idea of a bleeding heart, yet the flower is exceedingly pretty. It is a hardy herbaceous plant from China. Here is the *Odytonia Japonica*, or Japan quince, a beautiful scarlet flower that opens early in the spring. It is perfectly hardy, and every way desirable.

He wished to speak of the Orchids. This is a *Laelia*. It is a common notion with many that orchids can only flourish in a high temperature, but he had seen *Lycastes*, *Oncidiums*, &c., blooming finely where the temperature was allowed to go down to 45 degrees every night in winter. If this can be done, considerable fuel can be saved at least.

One great drawback to the advancement of Horticulture in this country, is that plants, to sell well, must have a foreign name and reputation. If Mr. Henderson, who raised this beautiful *Heliotrope*, the Belle of Jersey, had imported it from Europe under the name of the Belle of Lancaster, he would have sold five thousand where he has now sold one. He had seen a great deal of this. He had seen fine flowers in the hands of our florists year after year that could not be sold for want of a proper endorsement. The late George Thorburn was forced once to resort to the expedient of exporting and importing the same flowers to make them saleable here; and where he could not sell a few dozen before at 50 cents, he then sold hundreds of the same plant at a dollar! and now this is done over and over again. We must raise our own seedlings, and seek some means to beget public confidence in them. The best *Verbenas*, *Heliotropes*, &c., now in cultivation have been raised in this country.

On motion of Mr. Jreh Bull, a vote of thanks was tendered to the gentlemen who so kindly favored the Society with such a tasteful display of flowers.

The subject of "Early Fruits" was selected for discussion at the next meeting, and Mr. R. G. Pardee was appointed to open it.

Adjourned to Tuesday evening, May 31st, at 8 o'clock.

JOHN W. CHAMBERS, Rec. Sec.

Correspondence.

MR. EDITOR,—I wish to gain some information in regard to two of the new kinds of grapes, which I am unable to obtain from those who have them for sale. Can you, and if so, will you, enlighten me?

1st. Creveling.—Is it a wine grape? I have cultivated it, and have fruited it for two seasons. I am so much pleased with its early ripening and its flavor, that I shall plant out all the roots that I can procure this spring. I intend to raise the fruit for market; but there is always a quantity of fruit which must be worked up into wine. Before I lost my *Isabella* vines by mildew,

I sold the fruit readily, and made the remainder into wine with sugar, an article that is now too expensive to be used for wine-making, especially as we can make better wine with other grapes. If, as I believe, we can make wine of the Creveling, the fruit can be raised to a great profit, as fruit ripening from the 1st to 10th September is sure to bring a large price, say 20 to 25 cents per pound in New York, and the wine will pay a considerable portion of the expenses.

2. Adirondac.—I can get no satisfactory replies to my inquiries. Is it hardy?

Mr. Bailey, who propagates it, and has it for sale, may be considered an interested witness; but he says Mr. Witherbee "found an old grape vine," which he (Witherbee) "*supposed to be a wild vine*," and "dug it out." "The next season he discovered a vine near the same place." "The next winter it killed back," "and since that time he has given it the same treatment as his Isabellas, i. e., pruning, *laying down*, and *covering every winter*."

Now will Mr. Witherbee give us more particulars? Having sold his interest, he can be admitted as a competent witness. Will he inform us whether, in his opinion, this new vine that killed back is really the product of the wild vine? or did he or some of his family set out any vines on that "strip of ground which he inclosed to enlarge his garden?" We want light, and must have it before we plant extensively. I have examined the leaf of the plant sent out by Mr. Bailey, and must say that, to me, it has the appearance of the *Vitis vinifera*; and until we have Mr. Witherbee's statement, I am inclined to think it a foreign seedling, which "killed back the following winter." Why did not the supposed wild vine *kill back*? and if it did, what value has it over any other vine, even if grown in a northern climate?

PRATIQUER.

[We have no doubt that the Creveling will make a better wine than the Isabella, for it contains more spirit and grape sugar; still we are not yet prepared to rank it among wine-making grapes. Mr. Merceron and others can perhaps throw some light on this point. In regard to the origin of the Adirondac, we heard lately from a relative of the family, that Mrs. Witherbee raised it in a pot from seed taken from a raisin. If this be so, it will readily account for the tendency to mildew which we hear from many quarters has already developed itself, though this may be owing to other causes. It will also account for the Hamburg flavor which so much pleases those accustomed to eating foreign grapes. If, however, it originated from a foreign

grape in the manner stated by Mr. Witherbee and other members of his family, it can have but little value for general cultivation, and must take its place with the Brincklé, Montgomery, Child's Superb, and similar grapes. We further learn that these facts have been known from the beginning to those interested. It is quite important that they should be made public, and some notice taken of them.—Ed.]

EAST ABINGTON, Mass.

MR. MEAD,—Sir,—Through the kindness of a friend, I have had the privilege of looking through nearly a year's numbers of the *HORTICULTURIST*, and must say I have been much pleased with it. There is a certain freshness and adaptedness in its columns that makes it very interesting; and though there are not many more seasons of bud, fruit, and flower for me, being an old man, I yet anticipate much enjoyment from the cultivation of the *Pear*, the *Grape*, the *Peach*, and some of the smaller fruits.

The *Pear* and *Grape* are my hobbies, if any thing is. How can any one forego the pleasure of their company. Perhaps an apology is needed, not being a subscriber, but presume you will excuse me, as I am an inquirer, and it seems to be your pleasure to give information.

I want to ask a few questions, and perhaps criticise a little, but you will let *that* go for what it is worth, all well meant.

Will you in your next, or as soon as convenient, give a plain description of the different kinds of houses for fruits and flowers, saying wherein they differ?

I have but a few kinds of grapes as yet, say the Concord, Diana, Hartford Prolific, Delaware, and Rogers's Hybrid No. 15, the last not fruited yet, but looks very promising. I wish to add some three or four kinds, best for the table and market, and according to best accounts, I think Dr. Grant's two new seedlings, the Iona and Israella, with the Creveling, might suit me, but should like your opinion in regard to them and others.

I have read somewhere lately, that it is a good plan, in pruning vines, to cut out the *tendrils*; is it so?

In your July number was an account of the Leon le Clerc (De Laval) Pear, giving so good an account of it that I marked it for a desirable fruit for eating from the hand, as well as for cooking; and as the long keepers that are *good*, and will ripen well, are scarce, I said I must have it; but in the next No. behold it was good for nothing but cooking; so "my bread was all dough."

Then your correspondents make the Brincklé's Orange Raspberry a very tender plant. My experience for 6 or 7 years makes it a hardy kind, and I have never known it to be hurt by the winter yet, and they are very exposed, never having been protected in the least. It is one of the best.

Again, one or two recipes for making grafting wax in the *HORTICULTURIST*, might as well be a little more simplified. Instead of five or six ingredients, three are all that are required. I have made and used a great deal of it, and recommend it for using with the hand or with a brush, *warm*. Say two parts rosin, one beeswax, tempered with lard. I think I shall have to have your journal this winter, and I want to recommend greater attention to the *king* of fruits, the *Pear*.

Respectfully yours,

INQUIRER, JR.

[We are very much gratified with your good opinion, and hope you may live to enjoy many seasons yet of "bud, fruit, and flower." We will soon give you the information you desire. You can not do better than add to your list the grapes you have named. It is a good plan to cut off the tendrils of the vine. Many of our correspondents will not agree with you in regard to the hardness of the Brincklé's Orange, but all will agree with you in regard to its goodness. It is the best flavored Raspberry we have. We shall be very glad to hear from you again.—ED.]

BLOOMINGTON, Ill., Feb. 2d, 1864.

EDITOR OF THE *HORTICULTURIST*:

Dear Sir: "Remember the 1st of January, '64."

"Trim and cover the vines in November."

This shall be the inscription of a large sign over the main avenues of my vineyards. I wish every vineyardist would do the same, as this inscription will always bring the great destruction before his mind. Yes, Mr. Editor, we ought to be whipped, because almost every one of us knew, almost by instinct, that we would have a hard winter, for not covering our vines. I have 10,000 vines for fruiting, mostly on "lath trellises," such as Mr. Knox speaks of. Now all those vines could have been covered with earth, say 4 shovels full each, in one week's time by three men, at a cost of \$20. Yes, if I only had knocked the trellises down on the beginning of the storm, (which I could have done with my gardener in the course of five or six hours,) and let the vines be covered with the trellises, to which they were fastened, I would have saved all the crop and several thousand dollars in money, besides the most mortifying feeling that I could have prevented this loss.

The wood alone of my vines to be trimmed off was worth 1,000 dollars. Some 50,000 No. 1. layers of the best varieties would have been made, and most all the fruit for 2 or 3,000 gallons of wine gone, and the form of many vines destroyed for years. That is the picture of my so-called "Model Vineyard." As I do always for "experiment," I covered with a few forkfuls of litter the most of my Herbemonts, (you know a very tender vine,) but they are all good to-day. I covered, also, some Blood's Black, Diana, Traminer, Lincoln, Bird's Eye, Louisa, Mary, Anna, Hartford, North Carolina Seedling, Brincklé, Rogers's Hybrids, some 8 numbers, Allen's, Maxatawny, Baxter, Perkins, and about 30 other sorts, (I have over 160 varieties of vines,) and not one of them is injured. They also stood all the cold weather before

Christmas. Catawbas I trimmed Dec. 23d, and threw the wood on the ground. I found them last week uninjured.

As this little report is written in haste, I will only speak ramblingly, but will give you, if you or your readers desire, a full statement of the case, with some practical hints.

Taylor's Bullitt, a white grape, is the hardiest of all my vines. The wood exposed to the weather, even the wood on the many hundred of layers I raised, is perfectly sound. Next may come Concord, a very rambling grower, but wood hard as iron; beats Hartford Prolific in hardiness. I have 1,000 of Concord vines for bearing, and they have done well in fruiting; besides, I raised from almost every vine from 10 to 50 strong old wood layers, and it did not hurt the vine at all, as far as I can see now. Therefore, Mr. Editor, I call the Concord a good acquisition.

Delaware is very tender, but Allen's Hybrid and Rogers's Hybrid more so. Catawba and Isabella are all gone; but Clinton stands very well. In a short time I will give you a correct list. From Herman we have bad news; from southern Illinois very bad news; and so from Nauvo, Ill. In all, this winter has done more harm than any winter before, and more than the most of us think yet.

DR. H. SCHRODER.

[This, on the whole, is the most deplorable picture that we have yet seen. We sympathize with you most sincerely. Those who live in localities subject to such trying changes would act wisely in covering their vines; or, if this be inconvenient or too much trouble, let them, as we have often suggested, cut their vines loose, and simply lay them on the ground. We shall be very glad to have the full statement and practical hints.—Ed.]

STATE OF MINNESOTA, }
FALLS OF ST. ANTHONY, Mch. 4, '64. }

EDITOR HORTICULTURIST,—There are three

early grapes (besides the Delaware) that would seem, from the descriptions given of them, to be adapted to the extreme northern limit of the grape zone, viz., the Adirondac, the Israella, and the Creveling. All are said to be good. I want your judgment as to how they compare with each other in respect to flavor, size, earliness, hardiness, and productiveness, especially flavor.

In speaking of hardiness, I do not refer to exemption from mildew or rot, which, as far as my observation goes, never affect *any* grape in this dry climate; but capacity to endure cold. Some varieties winter-kill here, even when protected.

Is there any good early variety that you would add to the above list? H.

[We have hardly seen enough of these grapes to say whether they are sufficiently hardy to endure the climate of Minnesota. We have known the Israella and Creveling longest. They are perfectly hardy with us, but we are not prepared to say that they would be so with you, though we think they may be. We are still less prepared to speak of the Adirondac, the buds on our own vine being winter killed, the vine showing no signs of life up to the present time, while all our other vines have shoots from one to two inches long, with the single exception of the Yeddo, which we think is also winter killed, as it is in several other places. The Adirondac, Israella, and Creveling are not high-flavored grapes. The Israella is the sweetest and the Creveling the most spirited, the Adirondac, in this respect, taking its place between them. The Israella and Adirondac are the most tender fleshed. They are all of them about the same size. We have no reliable data for knowing how early the Adirondac is, but the Israella is earlier than the Creveling. In regard to productiveness, there is little difference between the Israella and Creveling, as we have thus far seen them. The Adirondac we have not seen in fruit. In regard to

these grapes, it may be safely said, that their exact earliness and hardness remain to be proved. You ought to try them to prove these points. We know of no other early grape that we would add to the list.—Ed.]

EDITOR HORTICULTURIST,—The HORTICULTURIST has often explained how to prune *young* pear trees, but has not, I think, taught us concerning *large* ones. I have a number that are about 15 to 25 feet in height, and have always been carefully pruned into perfect pyramids; but now, from their size and growth, it is almost impossible to go over them as formerly. Will it do to leave them now to take care of themselves? Or what is the true course? Truly yours, ÆSTIVALIS.

NEW BEDFORD, Feb. 15, 1864.

[You do not say whether your trees are now well furnished with fruit spurs, or whether they are making too much wood. Pear trees that have been pruned as pyramids till they are 15 to 25 feet high, should be in condition to need but little pruning. We will suppose they are in good shape and condition, and well furnished with fruit spurs. In that case, the knife is mainly to be withheld, except to cut out some misplaced shoots, or to shorten in some leading shoot that has made too rampant a growth. Any laterals that take a notion to become leaders should be pinched in during the month of June. On the whole, trees such as we take yours to be, require but little pruning, and that mostly with the thumb nail in the month of June.—Ed.]

EDITOR HORTICULTURIST,—What say you to this bit of nomenclature? I think much convenience, confusion, and disappointment, indicate the propriety of special terms in speaking and writing about grape and other plants. Here is the attempt to substitute a name in lieu of a phrase, like, *Seedling*, a plant propagated from seed. *Budling*, a plant propagated from a bud.

Bibudling, a plant propagated from 2 buds. *Cutling*, a plant propagated from a cutting. *Suckerling*, a plant propagated from a root-bud. *Graftling*, a plant propagated from a graft. *Shootling*, a plant propagated from a shoot. In describing grape vines, this last is usually called a *Layer*, which I would drop.

Yours ever, ROYCE.

[While it must be admitted that some of the phrases now in use are indefinite enough, innovations are looked upon with distrust, even where they are felt to be needed. Some of the names presented by our correspondent are definite enough. But we lay the subject before our readers for the purpose of eliciting criticism, and will not forestall it by remarks of our own at present.—Ed.]

COLUMBUS, O.

PETER B. MEAD, Esq.

Dear Sir: Please name the best four varieties of foreign Grapes for a warm vine-ry, and much oblige a friend.

BUCKEYE.

[For our own use we should plant Bo-wood Muscat, Chasselas Musqué, Grizzly Frontignan, and Black Hamburg. We prefer to plant chiefly grapes that are *high* flavored, which all the above are except the Hamburg.—Ed.]

EDITOR HORTICULTURIST,—I have, during the last two years, succeeded tolerably well in raising plums, by pursuing the well-known method of jarring the trees, and collecting the curculios on a sheet, and then killing them. Recently a gentleman, whose statements I usually credit, has informrd me that it is only necessary to jar the trees every morning about sunrise, and allow the insects to fall on the ground. He says they will remain on the ground all the day, and will not ascend to the trees until night, and that they will not sting the plums during the night. He says he has pursued this method for some years, and has never failed to raise a large crop of fruit.

If this plan will do, it requires but a small amount of labor to preserve this fruit. What is your opinion of it?

Very respectfully,

INDIANAPOLIS.

[This presents the Little Turk in an aspect new to us, and we must award to your friend the credit of being a close observer. Though it be perfectly true that the Curculio will not ascend the tree again till night, still your method of using the sheet is much the safer one; for you have the satisfaction of knowing, that when you have once knocked his Turkish down, he will not get up the tree again, even at night. What is the use of knocking him down twenty times, when you can do it once for all? In regard to the Curculio, Rose Bug, *et omne genus, thorough* is the word. "Kill 'em dead."—Ed.]

MUSKEGO CENTER, Wis., Feb. 5, 1864.

I wish to ask you a question in regard to some Dwarf Pear trees which I purchased last April. What will prevent rabbits from eating or gnawing the bark? I heated some tar, and while soft, applied it on the parts injured. Have I injured them in so doing? Will their growth be thrown back or hindered in consequence of injuries received? In some places they have eaten the new growth; in others the bark completely around the body of the tree. Hoping to receive an answer from you soon, I remain,

Yours respectfully,

F. HARRISON.

[If you have used common tar, the risk to the trees is not much. It would be better to tar muslin, and tie it around the trees during the winter. Banking the trunks with earth is a good protection, and easily applied. If we were much troubled with rabbits, we should go to the trouble of preparing protection for all our trees; and tarred muslin is one of the simplest you can use. Do not put the tarred side next the tree, and avoid gas tar, which is very hurtful. The gnawed parts

should be cut smooth, and covered with the preparation described by Horticola in a former number. They will soon heal over.—Ed.]

DEDHAM, Mass.

PETER B. MEAD, Esq.,

Dear Sir.—As a subscriber to your valuable Journal for several years past, I take the liberty of asking you where I can get the different Magnolias grafted or budded on the *Acuminata* stock, as I recollect reading in some journal of their much greater hardiness and vigor so worked, but have not seen them so advertised in catalogues. Do you think the *Magnolia macrophylla* and the *Halesia Diptera* hardy in the vicinity of Boston? and where can I get the last-mentioned shrub true to name? By answering these questions you will greatly oblige a constant reader.

W. L. F.

[The Messrs. Parsons used to have the *Magnolia* so worked, and we presume others have. They ought to advertise them. We think the *Magnolia macrophylla* and *Halesia* hardy in the vicinity of Boston. Any reliable nurseryman ought to be able to furnish the *Halesia* true to name, and scarcely any nursery is without it.—Ed.]

EDITOR HORTICULTURIST.—The cold weather of the 1st instant has killed all of our peaches and fine cherries. The only variety I have been able to find live buds on is the common Morello, and they are partly killed. It has also injured young cherry trees in the nursery rows, and I fear our grape vines are very much injured, so that it will about spoil the crop. How much more damage it has done I can not tell, as I have not examined other things, but the opening of spring will tell a sad tale.

LEWIS NICHOLSON.

EAST ROCKPORT, Ill.

[So it is from all our western and north-western country; but, fortunately, around us the damage has been comparatively small.—Ed.]

THE
HORTICULTURIST.

VOL. XIX.....JULY, 1864.....NO. CCXVII.

Taste versus Fashion.

IN Mr. John Henderson's very interesting essay on "Flowers," read before the Horticultural Association of the American Institute, and printed in our last number, there are some curious statistics in relation to the sale of cut flowers and plants in the principal cities of this country and Europe. Mr. Henderson shows, from his personal knowledge, that the sale of *cut flowers* in New York exceeds that of any other city; for example, London, Paris, Boston, Philadelphia, &c. We have no doubt that this is really so. He also shows that, in the matter of *pot plants*, the reverse of this is true. We have just as little doubt that this is also the fact. Now we are very much inclined to suspect that Mr. Henderson's facts and figures will lead some people to false conclusions, however illogical the statement may seem. For example, some will reason thus: The number of cut flowers sold indicates the taste for them; the number sold in New York exceeds that of any other city: therefore, the taste for flowers in New York exceeds that of any other city. The syllogism would seem to be perfect, and we are will-

ing to admit that it *ought* to be; but the truth is, it is very weak in its major premise. It is not, alas! a fact, that the sale of bouquets and cut flowers forms a true exponent of the taste for flowers, at least in large and wealthy cities. The sale points to something in that direction, no doubt, but it is not a true exponent upon which deductions may be safely based. A very little investigation that penetrates beneath the surface of things will discover, that the purchase of bouquets and cut flowers is governed a good deal by the love of display; the same motive, in fact, which causes one man to build his house a few inches higher than that of his neighbor. In a large proportion of cases, it is the ambition to excel one's neighbors in display. A gives a party, and spends a hundred dollars for bouquets and cut flowers. B determines to outdo A, and spends two hundred; and so the thing goes on. Hence, at large parties in New York, the chief thing talked of is the wealth of flowers that decorate the rooms. It has become fashionable to make an imposing display of flowers; and while the fashion

ENTERED according to Act of Congress, in the year 1864, by GEO. E. & F. W. WOODWARD, in the Clerk's Office of the District Court of the United States, for the Southern District of New York.

JULY, 1864.

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continues, bouquets and cut flowers will be in great demand. We readily concede that the fashion is an elegant and innocent one, but we can not admit that it is an exponent of a taste or love for flowers. The majority of those who indulge in these imposing floral displays do not belong to our Horticultural Societies, and are quite innocent of any knowledge of horticultural literature, which could not be said of them if they were imbued with a true love of flowers. Indirectly, they do encourage horticultural pursuits in their lavish expenditures for flowers; but a wiser use of the same means would afford horticulture infinitely more encouragement, besides intensifying their own sense of personal enjoyment.

The sale of *plants*, on the contrary, we accept as a truer exponent of a love for flowers. In this particular, New York is behind London, Paris, Boston, &c., in all which places we find a refinement of taste in horticulture, which, to our shame be it said, we have not yet attained to. New York ought to lead in horticultural taste, as it does in many other important matters. We have made some progress within the past few years; but we move too slow.

We are hopeful, however, that a finer development will take place within the next five years.

We have said that the sale of *plants* is a truer exponent of taste than the sale of *flowers*. By taste here we mean that nice appreciation which can only result from a deep love of an object. Now who shows the most love of flowers, he who buys a bouquet to decorate an evening party, and then throws it aside, or he who buys a plant, ministers daily to its wants, studies its development of leaf, bud, and flower, and in all things cares for it "as the apple of his eye?" To our apprehension, there can be but one answer to such a question. There is just as much difference between the man who "keeps up a country seat" simply because it is fashionable to do so, and the man who adorns his grounds because he finds health and enjoyment in it. The one is pervaded with a love of horticulture, the other with a love of show. The example of the one is a shining light; the example of the other, the glitter of a toy.

The influences growing out of this condition of things we reserve for another occasion.

HEALTH AND DISEASE OF PLANTS.

BY J. STAYMAN, LEAVENWORTH, KANSAS.

HEALTH of plants is the harmonious development of all their parts in such a manner as to preserve and prolong their state of being for the purpose of fulfilling the objects of their existence. Therefore, whatever is done for the purpose of perpetuating that condition in a harmonious manner will produce the best possible results. As long as this state continues in equilibrium, one part can not be built up to the injury of another, and plants will have a strong vital action, and will be healthy. But whenever this state is suddenly interrupted or long continued in active by any cause, they will lose their

vital action and become diseased, and are then susceptible to deleterious influences, and are subject to be preyed upon by various obnoxious insects, which soon set up a secondary disease, which still hastens them more rapidly to destruction.

Species of plants, like races of animals, have their peculiar characteristic of quality and hereditary tendencies, by which they are known; consequently health is a *marked state* of existence, with peculiarities common to all vegetation, and disease must be directly the opposite. By these unerring rules of health and disease before us, we can tell with absolute certainty the

result of the sum total of any number of given cases in strong contrast with an equal number of other cases belonging to the same species.

The question may be asked, what are the visible signs of health and disease, and how can we ascertain them? In the first place, we shall endeavor to give some of the strongest marks of health, vigor, and endurance. In the second place, we shall give the strongest marks of those of opposite tendencies. To fully describe these two states to the satisfaction of every person will be very difficult, unless we take two extreme cases, which we will do, and then leave it partially to the judgment of each person to arrive at any particular medium case. For instance, there is no person but knows a living plant from one that is not living; likewise we all know when a plant is dying for the want of being placed in proper conditions to live. But how many of us know, by the peculiarities of the plant itself, that it has a strong vital principle, and has a constitution capable of resisting deleterious influences, and is not subject to hereditary disease?

When we see plants with robust, short-jointed, stocky form, and well matured wood, with dark-colored bark, twigs, and buds, with thick, strong, dark green leaves, and brilliant, high-colored, and beautiful opening flowers, and evenly developed, dark-colored fruit and very dark seed, we then behold the most perfect examples of health, and plants just sufficiently supplied with electricity, etc. Every plant has certain natural habits in a state of health or disease. The formation and growth of their roots, the inclination of their limbs and twigs, the shape of their buds, the unfolding of their leaves, the expansion and color of their flowers, the development and peculiarities of their fruit, the color of their bark, buds, and leaves, are all true marks of their condition, constitution, and health, which may be read and understood by any close observer.

Though they have not locomotion of body, the symmetry of form, pulsation of heart,

sensation of nerves, or so complete an organization, or instinct of animals, yet they grow, seek nourishment in the direction in which it is to be obtained, perform the functions of life, unfold and perfect their fruit, make ample provision for the continuation and progression of their species, and have as marked signs of health and disease as they have.

From the above remarks we make the following deductions. The darker the color of the bark, foliage, flower, and fruit, all other things being equal, the more hardy and healthy plants are, and the greater will be their capabilities to withstand the various vicissitudes of climate, whether it is the sudden and extreme change of temperature, unfavorable locations, or the direct rays of the sun. High, brilliant colored flowers do not fade as soon as others, and all kinds keep longer in perfection by excluding the light. Upon the same principle, perishable articles will remain in a better condition and keep longer in the dark; consequently, all vegetation is susceptible of undergoing greater changes in that state without securing injury. Accordingly, plants will remove and transplant better in the dark, or by excluding the light from them a short time, which would give the dark of the moon the preference, (not from any influence she has, but from the light she reflects). The reason given for vegetation being more capable of resisting deleterious influences, and being susceptible of undergoing greater changes, when in the above relations, is, it is in a positive state to the surrounding object, and has a surplus to give out, like a positive conductor to an electrical machine. Dark color is not only the best to accumulate, but the best to retain electricity, which can be illustrated in the dark, in a cool, dry atmosphere, upon a black cat, compared with a white one, by rubbing them on the back quickly with the hand; the black one will give out sparks more abundantly, which can be seen and heard; accordingly, it must be positive compared with the other. If our

theory is true, dark soil contains more of the essential principles of life, and will support vegetable growth the best, it being in a positive state, and has a surplus to spare.

We shall, in the next place, endeavor to give some of the signs of a deficient constitution. When we see plants with a feeble, delicate growth, immature wood, thin and very light-colored foliage and bark, fruit nearly colorless, (this being their natural condition, we then see defective constitutions, and deficient organizations, and examples of hereditary disease, which are incapable of withstanding the various changes of climate, and the numerous external influences operating upon them.

Now as high color is a representation of hardiness, health, and vigor, so very light color is characteristic of tenderness, debility, and disease; consequently, the lighter the color of the leaves, flowers, bark, and fruit, all other things being the same, the less vitality they have, and the more feeble their growth, and the more subject they are to the various vicissitudes of climate.

White is so delicate a color, that Nature has concealed it almost from view, and protected it by a darker covering, as the bones, teeth, wood, and fruit. The beautiful pearl, the bright, glistening diamond, the rich treasures of platinum, silver, and gold, are all obscured from view by a darker color. Even the twinkling stars and the bright shining sun have their white rays partially shaded by red rays. The silvery moon, that gives her light by reflection, has her dark side; likewise the earth has its day and night; it can not endure the bright rays of the sun too long. The earth is wrapped in her gray mantle, and all nature at times is shrouded in somber hue, an emblem of stability and durability, as it were, to bid defiance to the surrounding elements. How delicate, feeble, and sensitive must the color be that nature has so universally protected and partially concealed from our view.

If our theory is true, then we have as

marked a state of deficiency in the vegetable kingdom as in the animal. It is for us to make the improvement in the one case as well as in the other. Who has not observed the law of progress in the animal race in the symmetry of form, harmony of proportion, beauty of locomotion, and fineness of quality? So, in the vegetable kingdom, we have a similar law of progress. We have made improvement in the growth and color of the flowers, in the quality of the fruit, but in many cases to the injury of the constitution. As in the animal race, we have overlooked one of the primary laws of progress, namely, color; consequently we have not made the improvement we should have done. Now as *color* is as essential to the constitution as sturdiness of growth, symmetry of form, or fineness of quality, we should use the same judgment and discrimination in the color as in the other qualities. It is reasonable to suppose that the constitution is as susceptible of improvement as the products of it are, if long enough continued in a proper manner. If so, it is the duty of the vegetable physiologist to point out the way and the laws to be observed in perfecting the constitution and its products. It is a physiological fact, that a hereditary deficiency in an individual constitution can not be very easily and completely remedied; yet by hybridization with hardy healthy sorts and their seedlings, continued through several generations, and adhering strictly to the primary laws of vitality and color, we not only improve the products, but the constitution also.

If the above deductions are true, we need never expect to make permanent improvements in the constitution of plants by hybridizing with light-colored flowers or fruit, neither from their seedlings. It must be by selecting the darkest colored bark, foliage, flower, and fruit, and hybridizing with similar sorts and their seedlings, where we must look for a rapid advancement in the vegetable kingdom.

We have now given you the two conditions of plants, the positive and nega-

tive. The dark represents the former, and the light color the latter. The positive leads to health, vigor, and progress; the negative to debility, disease, and degeneracy; yet it may lead to exquisite beauty,

the finest quality, but in the end to disappointment; while the positive has all the essential principles of life, health vigor, durability, beauty, and quality, with the certainty of ultimate success.

RESIDENCE OF TRISTRAM ALLEN, ESQ., RAVENSWOOD, N. Y.

THE accompanying view of Mr. Allen's house is a good example of the method of adding to a dwelling which has ceased to be of sufficient capacity for the require-

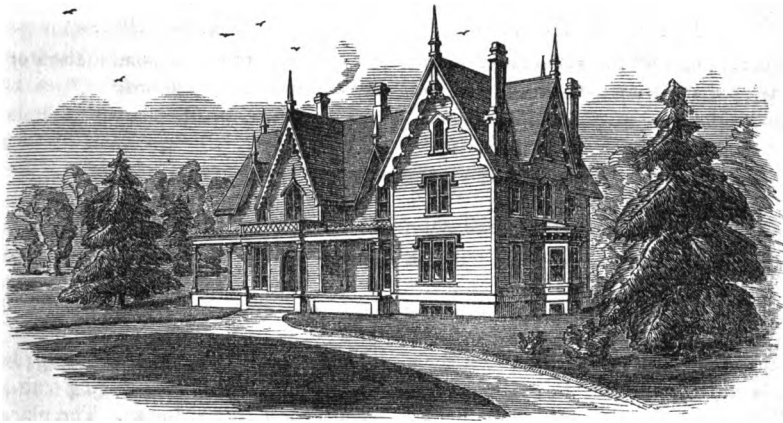


Fig. 1.—Perspective.

ments of the family. By reference to the basement or cellar plan, the outline of the old house and the foundation of the new will be distinctly seen. The addition transforms the cottage to a villa, and in a manner which preserves the proportions as

harmoniously as if the whole had been erected at one time and from one plan, thus illustrating a prominent advantage in this style of architecture, which admits more freely than any other successive additions, which, when properly designed,

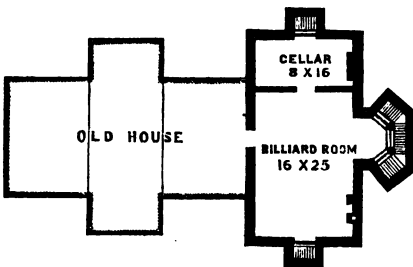


Fig. 2.—Basement.

add to the variety of outline, and its beauty of light and shade. The different floor plans show the arrangements of rooms and

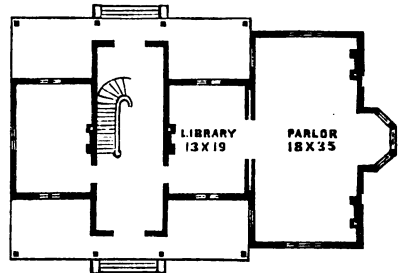


Fig. 3.—1st Floor.

their connection with the original building, which, it will be seen, are convenient and compact.

Ravenswood is one of the most elegant of the suburbs of New York, being near at hand, and having frequent and rapid communication with the city. Situated on

the Long Island shore, opposite the centre of Manhattan Island, overlooking the great metropolis and its outlying cities, of easy access to the Central Park by the Hell

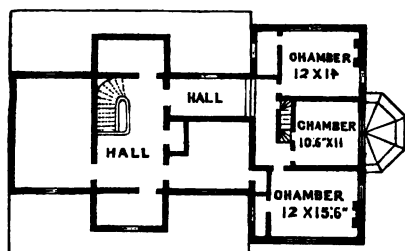


Fig. 4.—2d Floor.

Gate Ferry, amid all the refinement of fine gardens, polished landscape scenery, and architectural taste, it presents at once all

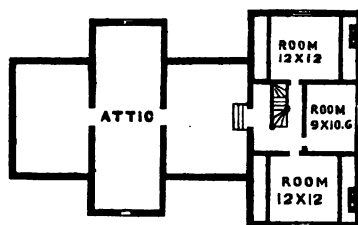


Fig. 5.—Attic.

the enjoyments that a combination of city and country life can afford.

COMPARATIVE HARDINESS OF THE DELAWARE AND CONCORD GRAPE VINES.

BY REV. LUTHER DODD, TOLEDO, IOWA.

IN the June number of the *Horticulturist* is an article over the signature of Dr. H. Schroder, of Bloomington, Illinois. There is a single item in that article which I wish to notice. After commending the Concord very highly for its hardiness, he says: "The Delaware is very tender." I wish simply to state a few facts which came immediately under my own observation, and your readers may each make his own inference. My residence is in Central Iowa, over a degree north of Bloomington, Illinois; my garden on high prairie, facing north, and without scarcely any protection. I have a Delaware vine, a large layer, bought of Dr. Grant, and planted in its present locality, two years ago last spring. Last season it bore ten fine bunches of grapes. The middle of November, I pruned and covered it lightly with soil. It was in a locality so entirely exposed to the northwest winds that I soon observed that most of the covering was blown off; but I thought that I would

let it be to try its hardiness. It had pleased me well in growing and bearing fruit; now for a trial of its hardiness. The place was so completely exposed to the wind that very little snow lodged on it during the winter. There it lay, pinned down with forked sticks to the ground, exposed to the peltings of the wind all winter. As I saw it, from time to time, I feared that the test would be too severe; but, highly as I valued it, I let it alone until time to take it up in April. I had let two shoots grow, of which I have made arms this season. These arms have each five shoots now (7th of June) which have made from fifteen to twenty inches growth each, and each show from one to three, generally three, bunches of grapes. The vine shows every sign of perfect health.

Now for the Concord. I have a Concord vine planted four years last spring—a good plant—which has made good growth, and borne fruit for the last three seasons. Its locality is further down the slope, and so

near the fence that it was much better protected than the Delaware by snow. It was pruned and laid down at the same time with the Delaware, and covered in the same manner. Its protection was in every way equal, and in many respects better than that of the Delaware. The arms had been made two years ago, and the shoots or cordons were cut back last fall to three buds. When taken up this spring, the primary buds were nearly all destroyed. It was late before it showed any signs of life, and the few shoots which have at length grown have made but very feeble progress; the vine is about as good as dead. Of the eight Concords which I planted a year ago last spring, not one lived over winter. They were all covered with earth; but all killed, root and branch. Delawares, planted at the same time, and treated in the same way, are mostly alive and growing finely. Some very feeble plants, which made but little growth last summer, died. Isabella, Diana, Allen's and Rogers' Hybrids, Tokalon, York Madeira, Rebecca, Ontario, Cuyahoga, and Golden Clinton, all treated just as the Delaware, were killed. Of the forty varieties I have none stood the test of last winter, except the Clinton, equal to the

Delaware. Next to the Delaware, the Creveling; then the Anna; next Concord, or the Hartford Prolific—it is about a tie. Two Concords, set out a year ago last spring, were found dead this spring, and a Creveling between them alive to the last bud, and now growing finely. They had all been set out at the same time, and treated alike, and made about equal growth last season. Now, Mr. Editor, all I desire is fair play. I have no interest in crying down either the Concord or the Delaware. Of the hardiness and general value of the Concord I have no doubt. But my experience is that the Delaware is not relatively tender, and consequently of little worth. They are both valuable in their place. In ordinary seasons either of them are hardy enough, with a little protection, to stand the winters of Illinois or Iowa. I hope that we shall have but few such trying winters as the last was. I have no disposition to engage in a controversy with Dr. Schroder. He gives his views honestly; I tell my experience faithfully. Facts must decide questions of this kind, and facts I have stated. Much depends on the way a vine is treated. Neither unripe wood or unripe roots will stand the rigors of an Iowa winter.

A NEW MODE OF TRAINING AND PROTECTING VINES.

TRANSLATED FROM DU BREUIL BY C. MARIE.

Mr. Marié sends us the following translation, describing a new mode of training and protecting the vine. It is not calculated for the vineyard, but has some merit when protection is desirable from whatever cause. Let the reader compare this with Mr. Weed's, in our last, and say which is the simplest and best.

"The vines are to be planted *en cordon vertical*, the height ranging from 0. 16 inches to 40 inches, according to the vigor of the vines. (Figs. 1, 2, and 3.) This form is perfectly well suited to the preservation or renewal of one or more long canes, as

is shown by the figures. These canes, which can be renewed every year by a shoot reserved at their base, are more or less numerous, and are pruned shorter or longer, according to the vigor of the vines. These vines are supported in the following manner: for vines of little vigor or trained low, (Fig. 1,) place on each row of vines two wires arranged as in a trellis. The first wire, A, is placed at 12 inches from the ground; the second, B, at 24 inches. For stronger growers, (Fig. 2,) where the canes are trained 28 inches, three wires are to be used; the first, A, at 12 inches

from the ground; the second, B, at 26 inches; and the third, C, at 40 inches. every twenty feet, on each of the double

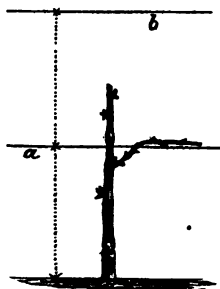


Fig. 1.

For the very strongest growers, (Fig. 3,) four wires are to be used, the first, A, at 12 inches from the ground: the second, B, at 14 inches from the first wire; the third,

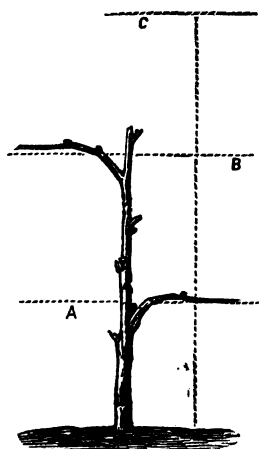


Fig. 2.

C, 14 inches above the second; and the 4th, D, at 56 inches from the ground. Each vine, during its formation, will be fastened to a stake, which is to be fastened to the wires, and no higher than the top wire. These stakes are only to be used until the vines have attained their full height. After this, the vines are to be fastened to the wires. One of the upper wires of the two double lines, the one placed on the north or west, (A, Fig. 4,) must be 5 inches lower than the wire B of the opposite side.

"In order to stiffen these trellises, so that

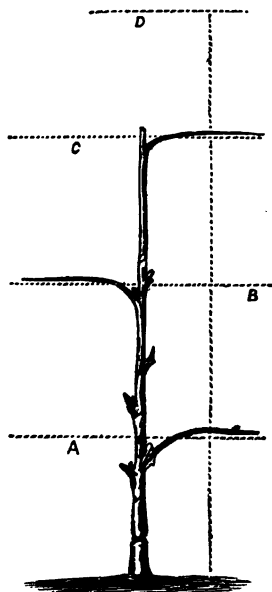


Fig. 3.

lines or rows, a strong post, (C,) soaked in sulphate of copper, and reaching to the height of the vines A and B, the top one of each row, as seen in the figure. Stakes D, to stiffen and steady the post C and C, are fastened together with wire at the point where they cross each other, (E.)

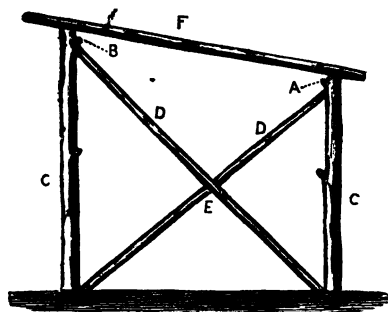


Fig. 4.

"This plan facilitates the use of shelter, to prevent the vines from late frosts and prolonged dampness in the summer. All that is necessary to be done is to place a straw mat, F, (Fig. 4,) 32 inches wide, on top of the double line of wires. The straw

mat will naturally be inclined towards the north or west, in consequence of the difference of level of the wires, the result of which will be, that the rays of the sun

will have free access from the south or east ; that it will afford better protection against the cold winds, and offer less resistance to them."

MONUMENTS.—NO. III.

BY A PARISH MINISTER.

It is natural and becoming that we should follow the friends we have lost with deep and affectionate regrets, that we should treasure up in our memories all the proofs of their love and kindness towards us, and that in the fulness of our overflowing hearts we should endeavor to demonstrate, by all acts of reverential tenderness still in our power, how much we mourn their loss, how much we desire to preserve their beloved remains from being disturbed, and to keep up the remembrance of them in the minds of those who survive, and who were once their neighbors and familiar friends.

It is for these purposes that we mark the places where we have committed their bodies to the ground, in sure and certain hope of the resurrection to eternal life, with memorial stones. This is not only natural, but becoming and right in itself, supposing that no feelings of vanity or ostentation interfere to vitiate the amiable and sacred sentiments of reverence and affectionate remembrance. And, although these memorials can in no way benefit the departed, they may be a christian act, and one that may profit the living.

It is a comforting christian doctrine that there is communion still between those who are living in the faith and fear of God on earth, and those who are resting from their labors in the repose of Paradise.

Of the nature of this communion and fellowship we know, indeed, but little; but one of its practical results is to produce in us a deep feeling of reverence towards the departed—not only reverence for their sacred dust and for the graves which hold their crumbling bodies in trust, but a reve-

rence which would make us careful and even sensitive of speaking of them in any manner which would imply exaggeration or boasting.

It is the natural impulse of strong affection to remember the good qualities of the dead, and to forget the imperfections and infirmities of which we were more or less conscious while they were living. If we speak of them at all, it is as if they had been almost faultless. We shrink from the contemplation of their failings, and our memory loves to dwell on the good qualities which made them dear to us. But, as respects our deepest feelings for those who are gone before, we are altogether silent. Our thoughts of them are too sacred for us to allow a stranger to intermeddle with them. We would hide them from the gaze of the thoughtless and indifferent, in some secret corner of our hearts, even as the green earth hides their fading forms.

Such feelings of delicate and pious reserve ought to incline us to be equally careful with regard to the inscriptions we place upon their tombstones. If we are so sensitive in the one case, we should not be less so in the other; we should allow no inscriptions or epitaphs which would be likely to provoke unfeeling comments from strangers, or which could in any way expose their lives and characters to the criticisms of the rude and unsympathizing world.

Monumental inscriptions should, therefore be free from all expression of exaggerated personal feeling or affection, and from all praise of the deceased, except, of course, in those instances of eminent public worth where moderate praise could not

be withheld, and even in such cases, the simpler and briefer the inscription, the better. In ancient times the tombs of the departed were frequently left without even the names of their occupants being inscribed thereon, their surviving friends being content that these resting-places should be simply marked with some christian symbol, like the cross, to protect them from disturbance. And when inscriptions were introduced, they were made as short and worded as humbly as possible.

It is a good thing that we now have, in the neighborhood of nearly all our large cities and considerable towns, permanent and decent cemeteries which are never likely to be disturbed and desecrated by "the spirit of improvement," as it is oddly enough called. This new interest and attention to the places of burial has created new interest and attention to the subject of monuments and inscriptions. As respects the latter, there are too many instances of bad taste. Without going into details, we cannot avoid alluding to a species of sentimentalism which is very common and which ought to be avoided. We mean such inscriptions as these: "OUR DEAR LITTLE WILLIE," "OUR DARLING FANNIE," etc., etc.

These children may have been, and doubtless were, inexpressibly dear, and their departure felt as a great affliction. But the careless stranger does not sympathise with these feelings. It does not

concern him that this affection and grief should be paraded, perhaps in gilded letters, and with an affected orthography of familiar names.

A head-stone has recently been ordered from one of the drawings presented in our article in the May number of the *HORTICULTURIST*. We copy the inscription, with change of names, as illustrative of our idea of what is suitable in such cases.

JOHN THOMAS CHRISTIAN,

THIRD SON OF

EDWARD AND MARY HOPE.

BORN, JULY 1, A. D. 1860.

DIED, JULY 1, A. D. 1862.

"HE GIVETH HIS BELOVED SLEEP."

This is to be cut in the plain Roman letter, without any flourish or ornamentation. For the text from Scripture the old English letter, to which we are partial, might be used. But as a general rule, inscriptions should be so plain that they may be easily read by children and persons partially instructed.

Texts of Scripture, expressive of christian humility and hope are always appropriate. But poetry should be avoided as offensive to good taste. If we were not writing upon a serious subject, we might present many examples of poetic inscriptions which are painfully ridiculous. But we forbear, leaving the suggestions we have offered, at this point, to be taken up again, perhaps, in a future number.

A NEW GRAPE DISTRICT.—Standing on the lake shore at Cleveland and looking westward, at the distance of sixteen miles we see a high point of land putting out into the lake, known as Avon Point. This point is not very pointed in fact, though it looks so to the spectator on the shore at Cleveland, but is a wide projection of land, ten miles wide in the waist, with a rather abrupt corner on the northeast which faces this city, and contains an area of a thousand acres.

This land on Avon Point, being high and

of a firm clay composition, has been judged just the thing for grapes, and as the Point is encircled on three sides by the lake it is thought to be as well protected as the Islands. In view of these facts, several gentlemen of Elyria and vicinity have commenced the planting of grapes on Avon Point, and have already put in some fifty acres of vines. This auspicious beginning has had the effect to run up the price of land almost to the fancy figures which it bears in the grape regions of Sandusky and the Islands.—*Ohio Farmer*.

COLMAR DES INVALIDES PEAR.

Fruit, very large, pyriform. *Skin*, russetty yellow, sprinkled with russet dots. *Calyx*, small, open, segments stiff, in a small, shallow basin. *Stalk*, stout, long, set

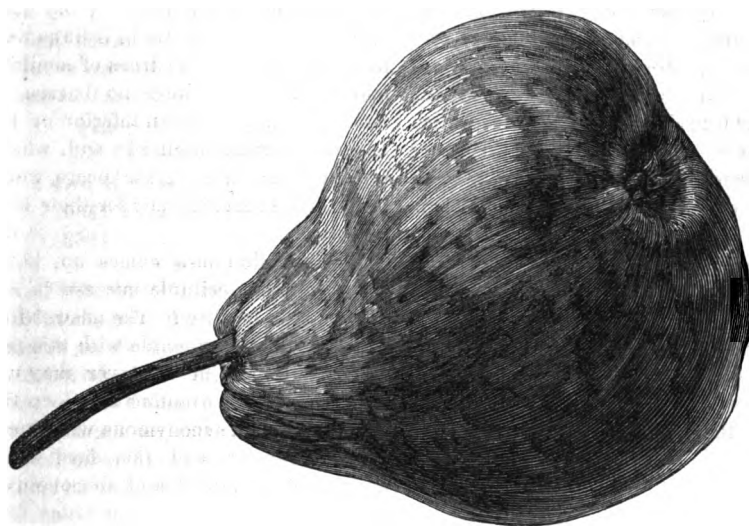


Fig. 1.—Colmar Des Invalides.

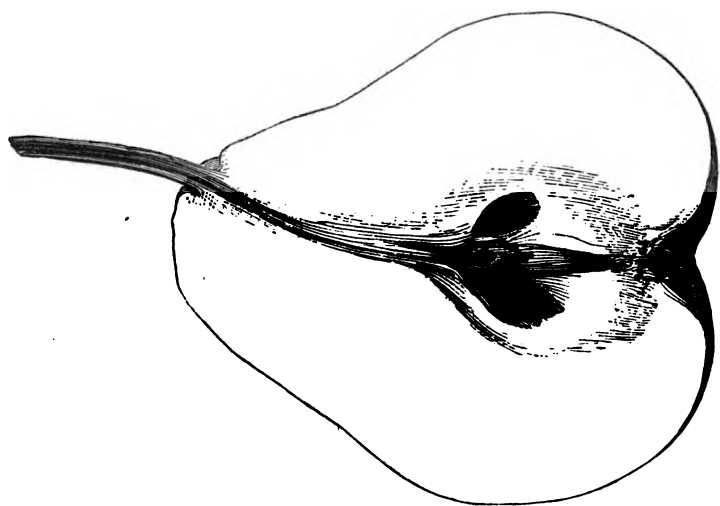


Fig. 2.—Section.

at an angle in a one-sided depression, with a fleshy protuberance. *Flesh*, white, coarse, somewhat gritty at core, moderately juicy, sweet, half melting, with a good flavor.

Our specimens ripened during the first week in May. It may be classed as a good late winter pear.

MOUNT LEBANON AND ITS PEAR ORCHARD.

BY WILLIAM BACON, RICHMOND, MASS.

To those familiar with the location of the village of the "United Society" at New Lebanon, or, as the post-office distinguishes it, Mount Lebanon, any description will be needless; but, as our remarks will probably fall under the notice of many who have never visited their neat and pleasant village, and as we may at future times allude to their successful horticulture, it may be proper to enter more minutely into the details of their locality than would be necessary if we gave their operations only a passing notice.

Geographically, this village is in lat. 42 deg. 30 min. north, and in long. 73 deg. 25 min. west. It is located on the western slope of the Taconic mountain, which forms an angle in its course at or near the south family, towards the east, and then stretches off in a direction north by east, towards Vermont. The mountain here rises some seven or eight hundred feet above "Lebanon Flat," and about two hundred feet up its side, and at an elevation of near one thousand feet above tide water, the village and gardens are located. Here, high in the air, and with a full exposure to northerly and westerly winds, this persevering and industrious people have attained a success in horticulture, which ought to be imitated by all, and may well raise the blush of shame on those who have failed of success in more favored localities.

It may reasonably be supposed, that with so extensive and abrupt a slope as is shown by the western face of this mountain, the heavy rains would wash the muck off the surface; but their judicious management appears to have, to a great extent, remedied this evil.

In October last, we were invited to visit a pear orchard, located east of the village, on the side hill, having a full exposure to the northwest. The trees were mainly

standards, and apparently about a dozen years old, and at the time of this visit they exhibited such a burden of fruit as we had never before seen on trees of similar age and size. There were no barren trees among them, and not an inferior or sickly tree in the whole orchard; and, what was more and far better, the pears were all large and exceeding fair for their several varieties.

The question now comes up, how did they attain so desirable success in so unpromising a locality? The answer lies as follows: It is a principle with this people to be thorough in whatever they undertake. Thorough draining and deep tillage are, with them, synonymous with successful cultivation; and this land was, of course, well drained and thoroughly cultivated. In preparing the holes for the reception of the trees, ample space was allowed to give the roots years of extension before they reached the earth that had not been removed; and then, good and thrifty trees were set, and the finely pulverized soil, intermixed with a liberal proportion of compost, was placed around them.

We are not informed of the general after-culture of these trees, but their thriftiness, both in growth and bearing, showed conclusively that ample justice had been done them. Last fall the ground was in grass, but the trees, for some distance from the trunk, were heavily littered with refuse coarse grass. This kept the soil loose over and around them, and enabled them to retain a more equal degree of moisture than would otherwise have been the case. It also tends to equalize the temperature of the soil, shielding it from the scorching heats of summer and the severe cold of winter—two considerations of great importance in successful fruit-growing.

Another feature in this orchard, probably connected with thrift and fertility, was, that the trunk of each tree was protected by a straw covering, extending from the ground to the lowest branches. Here was labor expended beyond that usually given to pear, or, indeed, any other fruit trees; for the advantages of which, it is claimed that it is injurious to the trunk of any fruit tree to be exposed to the scorching rays of the summer's sun, or the equally destructive influence of the severe frosts of winter. Perhaps we may well say it saves the tree from the frequent freezings and thawings to which fruit trees are so subject. It also protects the trunk from the depredations of insects, such as the bark louse, that has been so formidable an enemy to many young fruit trees, especially those of the careless cultivator, for a few years past.

We found in this orchard, one of the best specimens of successful pear culture that has ever fallen under our observation, and we have alluded to it to show the faint-hearted and careless pear grower how high a success may be attained where natural causes are somewhat deficient, by adopting a thorough and systematic course of cultivation. Some will no doubt say, that they cannot bestow the amount of labor on their trees, which appears to have been expended on those under consideration. But to the Shakers, it has been "the labor that profiteth," and this is the ultimate object and end of all labors, in some way or another.

In pear-growing, one of the great hindrances lies in the lack of labor and watch-

fulness. To do right things, in the right way, and at the right time, is important in any business, and becomes more important in proportion to the obstacles to be surmounted and the end to be attained.

Good pears are healthful, and are a favorite fruit with all. Yet but a small proportion of the population are furnished with even a meagre supply. There is no reasonable cause why they are not. There may be, and sometimes are, failures in the growth of trees, and in their productiveness, which the cultivator cannot prevent; unpropitious seasons may bring blight, or new and unheard-of insects may make progress in the work of destruction, "while men sleep," and before their existence is known; but nine-tenths of the want of success lies in the carelessness of the cultivator.

It is a pleasure to look upon a tree we have planted, and see it expand in proportions of symmetrical beauty. It invigorates the whole man to see such a tree awake from the lethargy of winter and deck itself with the flowery beauty of spring, or put on the more sober verdure of summer. It is a luxury, a health-giving luxury, to sit under its shade in autumn, and feast the taste upon its ripe, falling fruit, blushing in gratitude for labor bestowed upon the parent tree to give it health and strength to hold it until maturity had done its work of softening it to delicious pulp and painting it for a festal destiny. Happy are they, and sure of abundant success, who labor faithfully and unremittingly to secure such pleasure.

FORCING STRAWBERRIES.

BY RICHMOND.

ALTHOUGH the culture of the strawberry in the open air has been brought to great perfection in this country, its culture under glass has not generally received the attention it merits. This results, no doubt,

from the ill success attending the forcing of the finer varieties, without reference to their sexual character, which, strange to say, is often overlooked by those who, in the out-door culture of the Strawberry, are

great sticklers for the proper quantity of staminate for their pistillates.

This modern discovery, which has been so successful, and is now so well understood, can be adapted to forcing as well as to out-door culture, and it is to be credited to the discernment of American horticulturists. The person to whom the honor of its discovery is due is unknown to me, but it is conceded to be one of the greatest improvements in the culture of this fruit. It is remarkable that it escaped the observation of the most eminent fruit growers of Europe, or, if known by them, never made public, or applied to any extent. Indeed, many good gardeners of whom I inquired concerning the sexual distinction in the different varieties, informed me that in Europe the strawberry was always considered Hermaphrodite, which agreed with the opinions of the gardeners of the locality in which I served my apprenticeship. This does not seem to be very creditable to the gardeners of the old world; but they never had any necessity to trouble themselves about the matter, as their strawberries always set well, and any thing to the contrary never entered their thoughts. Their climate is better adapted to the production of large fruit than ours, but at the expense of flavor. I also think that the humidity of their atmosphere is more conducive to the setting of the fruit.

But to return to the forcing of strawberries. I can safely say that very early forcing will be found neither profitable nor pleasing, even with the best varieties for that purpose. The first of February will be early enough; and they should have been potted in August or September. One-year old plants are best. At the approach of severe weather they should be plunged in coal ashes in frames or pits with sashes, and protected from severe frosts, giving air on mild days, and if very dry, a little water on the root; and so remain till wanted for forcing, at which time all decayed leaves should be dressed off and the pots surfaced.

After being placed in the strawberry house, give them a good syringing, and admit as much air as will keep the house at 50 degrees during the day. The night temperature should not be higher than 45 degrees. Do not give much water at the root until they begin to grow freely, which, with frequent syringing, they will do in a week or ten days. After this time, guano water ought to be given twice a week, till the fruit begins to color; then withhold it; also discontinue syringing. At no time during the forcing of strawberries should the night temperature go above 55 degrees, or during daylight over 70 degrees, which will even then be too high, except the plants are very near the glass. As the fruit is coloring, place bits of sticks across the pots to support the fruit, and to prevent it pressing on the rim of the pots; the fruit being so soft, it is easily spoiled, its own weight often spoiling it when lying against a hard substance. From the time coloring commences, all opportunities of airing the house should be attended to, and the pots should be turned often. If they are plunged in spent tan or sand, less water may be necessary than if exposed to the air. I prefer the latter way, as the house will be drier at the ripening of the fruit, and as much water may now be given as will just keep the leaves from flagging, and no more.

If very early strawberries are wanted, some sure setting kinds ought to be used, such as Chorlton's Prolific or Triomphe de Gand. The last variety is not so reliable as the first for early forcing, but it is fine as a succession, and will stand more heat, and requires a close, humid atmosphere to set well in. Syringe freely over the plants when in bloom; it will not injure them, but will help to set their fruit well. The philosophy of this I do not pretend to account for; but this much I can testify, that with other fruits, such as Peaches and Canon Hall and Muscat of Alexandria grapes, the most certain way to set them is to syringe them while blooming, and I have had them as well set as Hamburgs by this

means. Strawberry plants that have been forced once are generally considered worthless for fruiting in the house the following season, and are usually thrown away, except they are a scarce kind, or wanted to get stock from. I have often thought it would be worth while to force them again, as I could see no reason why they could not be permanently grown in pots, as well as peaches, vines, etc. I was the more confirmed in this opinion when I happened to examine the ball of earth surrounding the roots of some forced strawberries, and found that the roots had not penetrated through the ball to the inside of the pots, although the plants were strong and had borne good fruit; so I determined to try them again without re-potting. Then, having given them a top-dressing, composed of leaf mould, loam, and wood ashes, they were watered and set in a rather shady situation till the approach of severe weather, when they were

plunged in coal ashes and covered with frames. Having sashes to protect them, here they remained until wanted for forcing. At the proper time they were taken to the forcing-house, and produced plenty of fine fruit.

Plants layered into pots, which is generally practiced, will not make as good roots as those transplanted once or twice before being potted for forcing; and I have an idea, that if they were first planted in rather small pots, and shifted as often as their roots would indicate the necessity of, it would succeed. I shall try the experiment at the first opportunity. Some may object to the trouble of all this, but I think good fruit will repay any trouble. As a proof of what may be done with the strawberry, I have dug up plants in the month of January, and planted them in pots and in moss baskets, and had good fruit in March.

THE TEN COMMANDMENTS OF POMOLOGY.

BY HORTICOLA.

As asparagus and green peas are found, in the spring, in every good vegetable garden, so new ideas are apt to spring up in different heads so soon as their season arrives. The Dutch claim Koster as the inventor of the art of printing, while the Germans fight for their Guttenberg. Whether Newton or Leibnitz discovered the Differential Calculus can not be settled, except by the assumption that the great discovery was made by the two great men at the same time, independently of each other. Is it, therefore, to be wondered at, that the accomplished editor of the *HORTICULTURIST* should have penned his *Thirty-nine Articles of Faith in Pomology* nearly at the same time when a clergyman in Bohemia published the *Ten Commandments of Pomology*? This co-incidence being interesting to both of us, Mr. Mead and ourself, I yielded willingly to trans-

late them into the English language for the *HORTICULTURIST*.

In attempting this, I feel the impossibility to do justice to the original, the language of which is so powerful and characteristic, so brief and full of meaning, that no translation could convey an adequate idea of it. To each commandment is added a long and practical explanation in a familiar style, like Luther's in his explanation of the commandments in his Catechism. The whole forms a small octavo volume of 151 pages of close print. The author is CHARLES FISCHER, minister of the Gospel at Kaaden, in Bohemia, a man indefatigable in his endeavors to promote the culture of fruit-trees by teaching and example. He is one of the correspondents of the *Monthly for Pomology*, by OVERDIECK and LUCAS. The little book is teeming with practical instruction and hints,

so that the Prussian government bought a large number of copies for distribution in the common schools of the kingdom. Not all assertions contained in it will, it is true, be received as indisputable truths; for instance, that a pear raised from any cultivated sort will always revert to its primitive type, the wild pear of the European woods, or that the culture of fruit-trees in America is rapidly declining; it contains, however, treasures of practical wisdom, and can not fail to benefit those interested in orchard culture.

First Commandment.—Thou shalt base thy faith only and exclusively on a vigorous seedling carefully raised; nor shalt thou suffer, beside it, either in thy orchard or nursery, any sucker; much less shalt thou make use of a sucker for propagation.

Second Commandment.—Thou shalt not call any kind of fruit-tree by a wrong name.

Third Commandment.—Thou shalt keep a watchful eye on thy fruit-trees during the time of their holidays, (Winter.)

Fourth Commandment.—Thou shalt honor the parents of our fruit-trees (the wild sorts) on account of their seeds, in order to raise from them long-lived, vigorous

trees, for the benefit of the culture of fruit-trees.

Fifth Commandment.—Thou shalt protect thy fruit-trees from injuries.

Sixth Commandment.—Thou shalt not propagate thy fruit-trees in an unnatural way. (Suckers for stocks are against nature.)

Seventh Commandment.—Thou shalt not impoverish the ground where thy fruit-trees grow, by constantly taking from them without ever giving (manure.)

(The original has: *Du sollst mit der obstbaumzucht keinen Raubbau treiben.*)

Eighth Commandment.—Thou shalt not bear false witness against the culture of fruit-trees.

Ninth Commandment.—Thou shalt not be immoderate nor uncautious in thy desire for new kinds and varieties of fruit-trees.

Tenth Commandment.—Thou shalt not always covet nurseries in the distance to procure thy fruit-trees from.

For the benefit of such as are able and wish to read the original, we subjoin the title in full: *Die Zehn Gebote den obstbaumzucht. Von Karl Fischer.* Berlin, 1861. (Ernst Schotte & Co.)

THE PUMP FOR THE CISTERN AND THE WELL.

BY L. FRITSCH, EVANSVILLE, INDIANA.

It is well known by every householder and farmer who uses a cistern or a well, that no pump can be used for them except a chain pump. The reason is that all the suction pumps draw the water with so great a force, and stir up so much of the mud or sand at the bottom of the well, that it either supplies a dirty water or excavates the foundation of the well. What is necessary to do if good force pumps may be used for well or cistern? I think it might be done if the pump draws the water through a hose of which the end

passes through a small plank or cork that swims upon the water, and ascends and descends with the quantity of water in the well. The length of the hose must be that of the depth of the cistern or well. With such an arrangement, the water is drawn from the upper parts of the water, near its surface, and not its bottom; in consequence the water must always be clear, and the bad qualities of our former pump arrangements are avoided. What do our pump makers say to this Mr. West, &c., &c.?

THE MEADOW PARK AT GENESEO,

BY THE LATE A. J. DOWNING.

THE recent death of Gen. James S. Wadsworth, in the battle of the Wilderness, will add a new interest to this description:

ALL our country readers have heard of the Genesee valley, its beauty and its fertility.

The great agricultural estate of the Wadsworth family is the pride and centre of this precious valley. That magnificent tract, of thousands of acres of the finest land, which surpasses in extent and value many principalities of the old world; those broad meadows, where herds of the finest cattle crop the richest herbage, or rest under the deep shade of giant trees; that rich spectacle of immense fields of grain, or luxuriant, broad-foiled maize, waving in the wind and ripening in the sunshine—all this is felt, by every visitor, to realise even an *ideal* picture of agricultural life.

There is something stirring in the history of this immense landed estate. Over the whole of its broad surface, as in the pages of a great folio, are written the genius, the practical sagacity and the taste of the family which has formed it. It is, too, a record truly American, of the subjugation of the forest, of the courage and advance of pioneer life, and of the wonderful progress and present prosperity of that still youthful region.

A little more than fifty years ago the whole of western New York was a wilderness. The Little Falls of the Mohawk was the western limit of cultivated lands. A couple of white families only had established themselves where the populous cities of Utica and Geneva now stand.

In 1790 the two brothers Wadsworth, educated and sagacious men, foreseeing the future value of this western wilderness, sold their patrimonial estate in New England, and, with a band of hardy axemen, penetrated the wilds, and settled where Geneseo now stands.

Of the energy, intelligence and practical skill, with which their operations were there conducted, this vast estate alone is a grand monument. James Wadsworth, the father of the present family, who survived his brother, and lived to a ripe old age, had the satisfaction of seeing, before his death, the wisest and the most extravagant hopes of his youth realized in the greatness and prosperity of western New York.

His own estate, covering many square miles, is an example, rare in this country, of the result of the principle of re-investment upon the land the profits of extensive agricultural industry. While other men of wealth sought investments in cities and monied institutions, Mr. Wadsworth added to his great landed estate, and improved the value of that which he already possessed.

The great farmer of Geneseo, at the present moment, is his son, James S. Wadsworth, Esq. Inheriting all his father's strong love of rural life and agricultural pursuits, he has added to them even more science, system, and completeness in his husbandry, which enables him to combine with the pleasure of extensive cultivation, an annual profit from his land, that would satisfy a reasonable capitalist who moves among stocks and bullion.

The farmer who, on a single occasion, swelled the contribution of his countrymen to the fund for the relief of a nation perishing by famine, by the gift of a *thousand bushels of corn*, from his own well-filled granary, is as well known and warmly remembered on the other side of the Atlantic for his philanthropy, as he is at home for his earnest zeal in all enlarged plans for the improvement of the calling or the condition of the agriculturist.

We must, however, not go into the details of farming, even on the large and interesting scale which this first of occu-

pations is pursued in that fertile country. We took up our pen to write a few words of admiration of the grand sylvan features of Geneseo. These the farmers are but too often apt to overlook.

The elder Wadsworth was, undoubtedly, a man of great natural taste. His visit to England, in 1796, may have developed his love for fine trees and parks; but no person, not naturally full of admiration for landscape beauty, would have preserved, amid the general wantonness of all early settlers, so much woodland beauty, in a country then a wilderness, unless there were a profound sense of the majesty and beauty of nature in his own heart.

How shall we give those who have not been at Geneseo an idea of the grandeur and beauty of the great meadow park of the Wadsworth estate? Let them imagine a broad valley, running north and south. It is bounded on the east and west by ground gently rising to the level of the country. The valley itself is not broken or undulating, but nearly level, like a great *savannah*. Through the midst of it meanders the gentle, placid Genesee river.

On the eastern side of this valley, and overlooking it, stands the village of Geneseo. It is a quiet, New England-like village, of a single long street, bordered with trees. At the south end of this avenue you enter the grounds and mansion of the late Mr. Wadsworth. The exterior of the latter is simple and unostentatious; but its interior breathes an air of the most refined and graceful taste. At the northern end of the village is the entrance gate of the mansion of James S. Wadsworth, Esq., an admirable specimen of a complete country house.

Both these mansions, placed nearly on the same level on the eastern slope, command a wide prospect of this valley.

And what a prospect! The whole of that part of the valley embraced by the eye—say a thousand acres—is a *park*, full of the finest oaks, and such oaks as you may have dreamed of (if you love trees), or, perhaps, have seen in pictures by

Claude Lorraine, or our own Durand; but not in the least like those which you meet every day in your woodland walks through the country at large. Or rather, there are thousands of such as you may have seen half a dozen examples of in your own county.

And they are not only grand, majestic, magnificent, noble trees—these oaks—but they are grouped and arranged just as you, a lover of the beautiful, and we, a landscape-gardener, would have had them arranged if we had the taste of Sir Humphrey Repton and the wand of an enchanter, and had attempted to make a bit of country after our own heart.

No underwood, no bushes, no thickets; nothing but single specimens or groups of giant old oaks (mingled with, here and there, an elm), with level glades of broad meadow beneath them! An Englishman will hardly be convinced that it is not a park, planted by the skilful hand of man hundreds of years ago.

This great meadow park is filled with herds of the finest cattle—the pride of the home farm. The guest at Geneseo takes his seat in the carriage, or forms one of a party on horseback, for the afternoon drive over the “*flats*,” as the Genesee valley is called.

Thus in readiness, you follow no roads—none are needed indeed; for the surface of the great meadow park, for the most part, is so smooth and level that you drive here and there, to any point of interest, as you please. To us, first of all, the trees themselves—many beautiful in their rich masses of foliage; many grand in their wonderful breadth of head and branches; and some majestic and venerable in their great size and hoary old age. Near the bank of the river still stands the great oak “Big Tree,”* under which the first treaty was signed between the Indians and the first settlers of Geneseo. Its enormous

* “Big Tree” was the name of the Indian chief, of the tribe which originally lived in this part of the Genesee country. The old chieftain has long since gone to the eternal “hunting ground” of his fathers; but the tree, which was venerable in his earliest youth, still survives him, and preserves his memory.

trunk measures sixty-five feet in circumference; it still wears a healthy crown of leaves, and is preserved with all the veneration which an object that awakens the sentiment of antiquity inspires in a new country. Not far from it stands the stump of a contemporary, destroyed a few seasons before by the elements. The annual rings of its trunk tell the story of *nine hundred years' growth*.

You hear a loud shout from one of the party on horseback. Immediately the groups of cattle, quietly grazing in the park, raise their heads and rush from all quarters, like a herd of mad buffaloes, towards your party! Do not be alarmed; for, strange as it may seem to you, they are most peaceably inclined, and are only galloping round you at the well-known call of their master, who has accustomed them to this little exhibition. You are now invited to alight, if you are fond of fine stock, and look at the good points of the cattle. And there is, among the many fine specimens around you, quite enough to drive all thoughts of an afternoon's nap from the head of the most indifferent breeder in the country.

What is the solution, you ask, as you resume your drive again, of the mystery of this peculiar growth of the trees in this great natural park? Has nature, who usually sows bushes and briars in thicket, and underwood amid the forest, taken it into her head to set an example here to planters of parks, and allowed only gigantic trees and broad meadows to extend, seemingly, to the horizon?

The tradition runs thus: This beautiful valley was a favorite hunting ground of the Indians. In order that they might render it as perfect as possible for this purpose, they were in the habit, every year at the proper season, of lighting fires. These fires swept over the whole surface, and destroyed all the lesser forest growth. The trees which survived grew on, larger and larger every year, until at length the whole reached the condition of a great park, as it was transferred to the white man.

There are many beautiful features in the scenery of the broad state of New York; but there is no picture of sylvan or pastoral scenery daguerreotyped in our memory, at once so fair and so grand as the meadow park at Geneseo.

ORCHARD HOUSE, &c., OF MR. ISAAC PULLEN, HIGHTSTOWN, N. J.

WE accepted, a few days since, an invitation from Isaac Pullen, Esq., of Hightstown, New Jersey, to visit his orchard house and nursery. Mr. P. has for a number of years past been a large and successful grower of peach trees and choice early fruit. Some three or four years since, for the purpose of testing new varieties, he erected an orchard house one hundred feet long by about sixteen feet wide, somewhat after the plans of Rivers. The trees are grown in pots from nine to fifteen inches in diameter, the pots plunged in the border of the house about two-thirds of their depth. This house was started early in January, and the first peaches (Hale's Early) were ripe about 8th May. Troth's Early, which has hitherto been considered

the best early peach, was nearly four weeks later. Both varieties were fruited under precisely the same conditions, which we think conclusively establishes the earliness of the Hale's Early. As soon as the fruit begins to color the pots are removed to the open air, where the process of ripening and coloring is finished, and fine flavor (of which almost all orchard-house fruit is deficient) is attained. We are of the opinion that no one could wish for better size, appearance, and flavor of fruit. Some of the trees have fruited for the fourth time, and are still vigorous, though confined to such limited quarters. What is a more beautiful object than one of these miniature trees, loaded with two or three dozen fine peaches or nectarines, growing in an

eleven-inch pot, which can be removed from place to place at pleasure? The well-kept nurseries, extensive pear, apple, and cherry orchards, of all the standard and tested varieties of their respective fruits, occupied much of our time.

The Bartlett pear is here the principal one cultivated for market, and by far exceeds all others as to profit. We are inclined to think the reason for this is, that the public know the fruit and purchase it, while the newer and better, though unknown, varieties are passed by. The same is the case with the Isabella among our native grapes, and the Black Hamburg among the foreign varieties; these find a ready sale when the Delawares and Muscats are neglected. Mr. Pullen has kindly furnished us a list of varieties found to succeed well under orchard-house culture, which we give for the benefit of our readers:

PEACHES.

Hale's Early.	Old Mixon Free.
Troth's Early.	Crawford's Late.
Large Early York.	Early Admirable.
Gross Mignonne (true.)	Late do.
Cooledge's Favorite.	Snow Peach.
Crawford's Early.	Old Mixon Cling.
Yellow Rareripe.	Late Heath Cling.

NECTARINES.

Pitmaston's Orange.	Hardwicke.
Elruge.	New White.

Downton.

These will furnish a supply the season through, from the earliest to the latest, except in the case of the peaches a gap remains to be filled between the ripening of the Hale's Early and Troth's Early, which we hope to see occupied ere long by some new variety. We are indebted to Mr. Pullen for a fine basket of fruit, which we will test and may report upon.

THE EFFECTS IN LANDSCAPE OF VARIOUS COMMON TREES.

BY W. LENNOX, MASSACHUSETTS.

I wish to enter a special plea in favor of that much abused tree, the *Lombardy Poplar*. It is the most formal of deciduous trees, and, therefore, the most effective when properly used, and the worst when abused. When the planting of poplars was the rage many years since, it is no wonder that when the long lines of monotonous trees sprang up all over the country, people got tired of them and cut them all down. But here and there a single fine tree or two was spared. In this part of the country there are half a dozen of these trees in conspicuous situations, that are landmarks in the landscape, towering with their green spires above the rounded forms of other trees, and fixing the eye at the distance of miles, by an irresistible charm. A single poplar, if a thrifty and vigorous tree, is never out of place. It supplies, as no other tree can, the want of perpendicular forms in the level or rounded

lines of our landscapes. The same quality that makes to the eye the hidden charm of castle and crag, viz., *perpendicularity*, is possessed by this tower of foliage. When backed or supported by other trees, and especially if water in front be added, as on the shore of a river, three poplar trees, of different heights, produce a magically picturesque effect; the sketcher cannot go by them without opening his portfolio.

Among our native trees, many that are formal when young, acquire with age and exposure a peculiarly picturesque appearance. The White Pine, when growing in exposed situations, becomes very stocky, and frequently branched and spreading. Its effect is so beautiful in this form, that I have often thought of cutting off the leading shoots of some fine young trees, to cause them to branch. Thrifty pine trees, in open ground, that lose their leading shoots at ten or fifteen feet from the

ground, frequently make the most beautiful spreading trees.

The greatest beauty of the *Hemlock* is in its youth; and in masses or clumps; the *Pine*, on the contrary, requiring much room, or it will grow slender and throw out no side branches. The *Hemlock* seems to grow the more thrifty the more it is crowded. Twenty young trees will unite into one impenetrable mass of verdure. As they grow large the smaller die out, and the large trees form the densest shade of our forest—so dark that no underwoods grow beneath them. The greatest beauty of the young *Hemlock* may be seen where they spring up by thousands in our open pastures, always arranging themselves in groups that no art could mend. I think the finest large *Hemlocks* I have noticed were on a mountain top, where a small number had been left by the wood-cutters. These trees, dwarfed by the bleak mountain air, had stems of great thickness, surmounted by an unusual breadth of the thickest dark green foliage. They produced that effect of breadth and massiveness usually wanting in our forest trees.

The *Fir Balsam*, when of large size and in open ground, is sometimes of remarkable beauty. The lower branches, if they remain thrifty, droop beautifully.

The *Larch* also requires room and age to develop its beauties. I think it is our usual fault in planting, that we plant too much in groups, for immediate effect, and so rarely see the greatest beauty our trees might attain. Also, we do not take pains enough to have our trees branch low, which is essential to produce massive trees and massive effects. A trunk that branches at six or eight feet from the ground, can bear a vastly greater weight than one of the same size that is twice that height; and nature always follows the hint. When the trunk is short, the main limbs become subordinate trunks, and acquire a greater size than they could maintain on a tall trunk.

To return to individual sorts. The *Elm*, even when thrifty, often grows lanky and

slender, and not sufficiently furnished with branches. If the principal part of the top be cut out low down, in healthy trees, even of large size, it seems to produce a thicker habit and vigorous growth. In one instance, a neighbor informs me that he cut two cords of wood from the centre of an *Elm*, some forty years ago. This tree is the largest and finest in the neighborhood; and though the work was roughly done, shows no signs of decay. Another tree, about forty years of age, has so thick, beautiful, and regular a head, that it is universally remarked. This, I have been told, was produced in the same manner.

The *Birch*, Yellow and White. Single trees on the edge of an evergreen wood, produce a charming effect of contrast.

The *Maple*. Its form is too regular usually to produce single standard trees, comparing with the Oaks, Chestnuts, and many others; but it forms the most beautiful groups. The *White Ash* changes in autumn to a deep, slaty purple—so remarkable among the gaudy colors of the *Maple*, that the eye at once detects a single tree on a mountain side. I would always plant a single tree in the groups of *Maple*.

To produce the most beautiful effects of autumn tints in a plantation, the pure lemon of the Yellow *Birch*, and the dark green of the *Hemlock*, must no more be omitted than the scarlet and russet of the *Maple* and *Oak*. The *Beech*, also, its green leaves unwillingly turning to brown on the outermost edges, is an exquisite tree in autumn, as at what season is it not? Why is it that the *Beech* is so little cultivated, and that we so rarely see this most beautiful of deciduous trees in perfection in this country.

The Mountain *Ash* is a charming tree, with its formal shape and scarlet berries, but it must be backed by tall evergreens to be seen to advantage. Formal, upright trees usually require a background of verdure, though occasionally a single one may stand out against the sky with great effect, in contrast with other forms. Avenues especially produce a meagre effect, when

they consist of formal or regular trees. Even the Maple grows too uniform and globular. The Chestnut is very desirable for this purpose. With the exception of the Oak, which we cannot wait for, the Chestnut, when growing alone, produces the most massive and varied forms of any tree I know in these parts.

The beautiful thorns that grow in abundance among our hills, are a singular instance of the effect of form apart from size. Aged trees, of a century's growth, with their broad flattened heads and short massive trunks, suggest ideas of venerable antiquity that the upstart Maples beside them can never attain. I have noticed the same effect in a few aged Apple trees, and have two in my mind that I would gladly transplant as ornaments to my house. There is another form of the thorn which is very beautiful, and easily produced. A stocky thorn, transplanted into rich ground, and headed down with those out-

side shoots and suckers, which, with a little care to prune a straggling limb, will produce a rounded pyramid or sugar loaf of solid green. I have seen beautiful thorns of this shape in the meadows, pruned only by the mower's scythe.

Unique effects are produced by the dwarfing effect of the exposed and open sides of our bleak mountains. Oak trees of great age, with wide, spreading arms, their tops not more than fifteen or twenty feet from the ground, and diminutive forests of Beech, of a similar character, make you believe that you have reached the country of elves and pigmies. The mountain pastures and the charcoal tracts, sometimes of thousands of acres, without fence or house, presenting large spaces of open ground, broken by groups of second-growth wood, and with every varied form of ground, from ravine to mountain, present a charming field for observation to the lover of the picturesque effect of trees.

GRAPE REPORT FROM KENTUCKY.

BY C. P. HALE, CALHOUN, MC'LEAN, CO. KY.

EDITOR HORTICULTURIST.—I have taken some notes on grapes and grape vines, which I give you for what you may think they are worth.

May 12, Clinton commenced flowering.

May 15, Bush grape " "

May 21, Hartford Prolific commenced flowering.

May 22, Delaware commenced flowering.

May 23, Concord and Catawba commenced flowering.

May 25, Diana commenced flowering.

Clinton and Hartford Prolific ripe second week in August.

Concord ripe fourth week in August.

Delaware ripe first week in September.

Diana and Catawba ripe second week in September.

The Isabella is somewhat later in ripening here than the Catawba; rots worse, and is not near so good a grape. I am

cutting my vines down, and grafting on them better kinds.

Now I will tell you what I think of the quality of the grapes named, the best first.

The Delaware is the best, and the greatest objection I have to it is its small berries, wedged together so closely that one can scarcely be pulled off without smashing it, and perhaps others. The Diana is next best, and Catawba next. Concord next. Hartford Prolific next. This grape is not good, compared with the others, but its earliness and productiveness will make it worth cultivating here. Clinton too sour to eat. The Bush grape I think worthless, except for its sweet flowers.

Now, if you have not heard what kind of weather we had here during the Summer, I will tell you. From about the 23d of June until late in July, we had almost

continued rain and dark, cloudy weather. The balance of the summer and fall almost continued dry weather. Now, if I am allowed to say any thing about mildew and rot, I must say there was not a variety of grape I had bearing that did not lose fruit by one or both. I had as well be told that a person raised on the mountains of Virginia or Pennsylvania, and located on the banks of Green River, would not have the ague, as to tell me that a grape will not mildew or rot under some conditions of weather we have here some seasons, for I should not believe either.

Last fall I sent to Dr. Grant, of Iona, N. Y., for a number of his best varieties of grapes for the purpose of experimenting with them in this climate. He sent me two of each kind of what he said were his No. 1, one-year old vines from single eyes, (except of Delaware 15 or 20 vines.) They were all grown near each other under the same treatment. Leaves and green wood destroyed October 5th. Now I will give you the length of vine, number of joints, and of ripe wood made by each, as near as I could tell by measuring and counting.

Delaware, 39 joints, 35 ripe wood, 6 feet 10 inches long.

To-Kalon, 21 joints, 19 ripe wood, 4 feet 8 inches long.

Allen's Hybrid, 26 joints, 1 ripe wood, 3 feet 2 inches long.

(The leaves of this were destroyed by

blight, and the wood did not ripen.)

Pauline, 18 joints, 5 ripe wood, 1 foot 8 inches long.

Elsingburgh, 24 joints, 18 ripe wood, 3 feet long.

Alvey, 29 joints, 22 ripe wood, 4 feet 6 inches long.

Rebecca, 24 joints, 16 ripe wood, 5 feet long.

Union Village, 41 joints, 34 ripe wood, 9 feet 6 inches long.

(Of this there were two vines of about equal strength.)

Lincoln, 35 joints, 28 ripe wood, 8 feet 4 inches long.

Herbemont, 40 joints, 32 ripe wood, 8 feet 6 inches long.

Lenoir, 26 joints, 22 ripe wood, 4 feet long.

(This lost its leading shoot by blight, and put forth many strong laterals, which were not measured or counted.)

Logan, 20 joints, 17 ripe wood, 2 feet 5 inches long.

Anna, 23 joints, 18 ripe wood, 4 feet long.

Cassady, 35 joints, 29 ripe wood, 7 feet long.

(One of the two of this kind failed to grow.)

Cuyahoga, 25 joints, 15 ripe wood, 3 feet 3 inches long.

If I shall be permitted to see these vines mature fruit, I shall be pleased to give you some notices of them.

NEW OR RARE PLANTS, &c.

We cull from foreign files the following new or rare plants, and add some of domestic origin.

AZALEA, *Forget-me-not*, (Ivery.) Described by Mr. Ivery as "Dwarf, compact habit, with small, neat foliage, the color a purplish red, with rich markings in the upper segments, and quite distinct from any other kind."—(*Floral Magazine*, pl. 193.) Has to us the appearance of being a well-formed, beautiful flower.

ITALIAN VERBENAS.—This name has been given to a class of Verbenas that are "mottled, striped, and dashed in a very peculiar manner." They are in the same strain as some raised in this country by Peter Henderson and others, but no better in marking, and not as good in outline. If our foreign cousins had been a little more enterprising, they might have had the same style of Verbena from this country four or five years ago, and in that case they

might probably have been called American Verbenas. As some years ago it was asked in Europe, "Who reads an American book?" so it may now be asked, "Who sees an American plant?" As the one question has already been answered, so, no doubt, the other will soon be. It has always been a mystery to us, that while American florists import about every thing new that appears abroad, their European brethren, either from lack of enterprise or want of interest, fail to secure the good things that originate among us. There is probably but one good reason for it; for it will not do to say that Europeans are content with their own. The *Floral Magazine* (pl. 195) figures three of the best of these so-called Italian Verbenas, raised by Cavagnini Brothers, of Brescia, of which it says, "They want that shape, contour, and substance which are obtained in the self-colored varieties of English and French origin; yet, as indicating a step in an entirely new direction, they are very valuable." The editor describes them as follows: "*Pallavicini di Brescia* is the best formed among those that we have seen, but then it is not so regularly striped as the others. It has a white ground with a brilliant crimson blotch in the centre of the pip, more or less filling it up, while it

is also blotched and spotted with the same color on the edges of the segments. *Conte Bernhardino Lecchi* has a white ground striped with crimson violet; the pips are small, but round, while *Caroline Cavagnini* is irregular in shape, but distinct in color, being a white ground striped with scarlet. As far as habit is concerned, we do not think, save *Pallavicini di Brescia*, that they are as vigorous as the older varieties," Mr. Peter Henderson's seedlings, on the contrary, are quite as vigorous as the average of the old kinds, and *Bizarre* and *The Banner* more so than many of them.

CAMELLIA, *Conte de Gomer*.—The striped varieties have of late years been more of those on white grounds, such flowers as *Countess of Derby* and *Countess Lavinia Maggi*, most beautiful, indeed, and well meriting the favor with which they have been received; but in *Conte de Gomer* we have a flower of a very different character. It was raised in Brescia (Italy) by *Conté Bornhardino Lecchi*, a well-known and ardent horticulturist. The color is a soft, beautiful rose, striped with broad and narrow bands of crimson. It is of large size; the shape of the petals is good, and the flower itself well imbricated.—(*Floral Magazine*,

EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Address all Communications for the Editorial and publishing departments, to GEO. E. & F. W. WOODWARD, 37 Park Row, N. Y.

Mr. Peter B. Mead has disposed of his entire interest and good will in this Magazine, to Messrs. Geo. E. & F. W. Woodward, both of whom have for some years past been connected with its editorial and business departments. The future

publication of the Magazine will be continued under their management, and in all respects will be kept fully up to the highest standard, and made of constantly increasing value.

STRAWBERRY SHOW AT THE AGRICULTURIST OFFICE.—This show was held on the 15th and 16th, as announced, and proved to be a very interesting affair, though not so large as that of last year. The day was too early for some of our large growers; and besides this, many flowers had been blasted. One of the most attractive features consisted in enormous plants of the Agriculturist and the Green Prolific, the first exhibited by Mr. Carpenter, and the last by Mr. Durant. They are both enormously productive, the Agriculturist being the most so.

The first prize for twelve varieties was taken by Mr. Francis Brill, of Newark, N. J., and the second by Mr. Heins, of Morrisania, N. Y. For a market berry, the Triomphe de Gand, Union and Bartlett, were entered. The Triomphe exhibited by Mr. George Herbert, of Peekskill, were very fine, and took the first prize. The second prize was given to Mr. Fuller for the Bartlett, the Union being considered too soft for a market berry, though it is large and handsome. Linning's White, exhibited by Mr. Heins, took the first prize among white strawberries. Mr. Fuller took the first prize for Alpines. The prize for the highest-flavored berry was awarded to the Brooklyn Scarlet, shown by Mr. Fuller. The prize for the three largest berries was given to Mr. Herbert, for Triomphe de Gand, weighing nearly one ounce each. There were only two seedlings that came under the rules, and Prof. Huntsman's Emily got the first prize. This is a handsome and delicious-flavored berry, resembling one of our own seedlings in color, and still more in flavor. Singularly enough, as we afterwards learned, they are both hybrids, containing the same strain of blood. A very fine sample of Triomphe de Gand, exhibited by Mr. Conover, received a special prize, and Mr. Durand's Green Prolific received special commendation, as did also a plate of the Union, shown by Mr. Trembley. Mr. Williams's plate of Ward's Favorite was commended for flavor. Mr. Carpenter's splendid plant

of the Agriculturist, did not come in till after the judges had finished their examination.

MR. EDITOR,—Why can not the *fetes* of the Royal Botanic Society of London, held annually in Regent's Park, in the months of May, June, and July, be successfully imitated by the Horticultural Society of the American Institute? The Commissioners of the Central Park would undoubtedly assign a place for the exhibition, where, under a large awning or tent, the finest specimens of our florists could be shown to the greatest advantage. Not only would the exhibition be attractive, but a small charge for entrance fees would pay all the expenses attending the exhibition, besides putting a considerable sum into the treasury of the Society.

The exhibitions as now held do not bring our rare and beautiful flowers sufficiently before the general public. As proposed above, the taste for flowers would be increased and extended, and the florists themselves be greatly benefited. Let the Horticultural Society place this matter in the hands of an energetic committee, and another season we can have an exhibition that will attract the lovers of flowers from all parts of the country. F. F. R.

AMERICAN POMOLOGICAL SOCIETY.—In order to give as much publicity as possible to the forthcoming meeting of the American Pomological Society, we herewith print its Circular, recently issued.

"In conformity with a resolution adopted at the last meeting of this national association, the undersigned give notice that its *Tenth Session* will commence in *Corinthian Hall*, in the city of Rochester, N. Y., on *Tuesday*, September 13th, 1864, at 12 o'clock, noon, and will continue several days. All Horticultural, Pomological, Agricultural, and other kindred institutions in the United States and the British Provinces, are invited to send delegations, as large as they may deem expedient; and all other persons interested in the culti-

vation of fruits are invited to be present, and to take seats in the convention.

"The Great Annual Fair of the New York State Agricultural Society will be held at Rochester on the following week, so that delegates who desire to do so can attend both meetings, and those who contribute collections of fruits to the Pomological Society can afterwards exhibit them at the State Fair.

"Throughout a large portion of the country the prospects of the fruit crop are very encouraging; and as the Fruit Growers' Society of Western New York will place its entire collection at the disposal of the American Pomological Society, a display of extraordinary interest may reasonably be expected.

"Among the prominent subjects which will come before the Society at this session will be that of the revision of the Society's Catalogue of Fruits. The Special Committee appointed for this purpose are now, with the various State and local committees, actively engaged in collecting such information as will aid in determining what varieties are best adapted to the different sections and districts of our country, and this information, in the form of reports, will be submitted to the action of the Convention.

• "All the States and Territories are urgently invited to be present, by delegation, at this meeting, that the amicable and social relations which have heretofore existed between the members of the Society may be fostered and perpetuated, and the result of its deliberations, so beneficial to the country at large, be generally and widely diffused.

"Members and delegates are requested to contribute specimens of the fruits of their respective districts, and to communicate in regard to them whatever may aid in promoting the objects of the Society and the science of American Pomology.

"Each contributor is requested to come prepared with a complete list of his collection, and to present the same with his fruits, that a report of all the varieties

entered may be submitted to the meeting as soon as practicable.

"All persons desirous of becoming members can remit the admission fee to THOMAS P. JAMES, Esq., Treasurer, Philadelphia; or to the President at Boston, who will furnish them with the Transactions of the Society. Life membership, Ten Dollars; Biennial, Two Dollars.

"Packages of fruits may be addressed as follows: "*American Pomological Society*, care of JAMES VICK, Rochester, N. Y."

"MARSHAL P. WILDER, *President*.
"JAMES VICK, *Secretary*."

LEAVENWORTH (KANSAS) HORTICULTURAL SOCIETY.—Our Kansas friends, fully alive to the importance of Horticulture, about a year since formed a Horticultural Society at Leavenworth, and we are told that it is now going on prosperously. The officers for the present year are as follows:

President, Dr. Wm. M. Howsley. *Vice-President*, J. R. Whitehead. *Recording Secretary*, J. C. Walkinshaw. *Corresponding Secretary*, Dr. J. Stayman. *Treasurer*, William Tanner.

WORCESTER COUNTY (MASS.) HORTICULTURAL SOCIETY.—The Twenty-fifth Annual Exhibition of this Society will be held at Horticultural Hall, Worcester, Mass., from the 20th to the 23d of September next. The prize list is a very good one, and should insure a liberal show from old Worcester.

MISSOURI STATE HORTICULTURAL SOCIETY.—The annual meeting of the Society was largely attended, and the proceedings were unusually interesting. We present a brief abstract of the results.

The proceedings were opened on the first day by an interesting address from President Mudd, in which he reviewed the labors of the Society for the past year, and its prospects for the future.

After the usual routine business, the discussion of apples was taken up, and the following were adopted for market, viz.:

Early Harvest, Early June, and Red Astrachan.

The following were then adopted for family use: *Sine qua Non*, *Early Harvest*, *Sweet June*, *Early Strawberry*, *Summer Queen*.

The five best fall market apples were next taken up, and an interesting discussion followed as to what were and what were not fall apples. The following were finally adopted: *Rambo*, *Maiden's Blush*, *Hubbardston's Nonsuch*, *Fameuse*, *Ramsdell Sweeting*.

The preceding market list was then adopted for family use.

A list for winter was then taken up, and divided into early and late winter, and the following adopted for *early winter*: *Wine Apple*, *Smith's Cider*, *Fall Queen*, *Pryor's Red*, *Rowe Beauty*, *Red Canada*, *Red Sweet Pippin*.

The following were adopted for family use: *Yellow Bellflower*, *Peck's Pleasant*, *Rhode Island Greening*, *American Golden Russet*, *Jonathan*, *Lady Apple*.

Mr. George Husmann next read an interesting essay on "The Adornment of our Homes," which was warmly received.

Mr. Carew Sanders then read an address on "Flowers and their Culture," which was also well received, and, with the essay of Mr. Husmann, ordered to be printed.

Next in order came late winter apples, and the following were adopted: *Rawles' Janet*, *Newtown Pippin*, *Michael Henry Pippin*, *Willow Twig*, *Wine Sap*, *Gilpin*, *Ben Davis*, *Ladies' Sweeting*.

The following four were adopted for *cider*: *Howe's Virginia Crab*, *Gilpin*, *Newtown Pippin*, and *Harrison*.

HORTICULTURAL ASSOCIATION OF THE AMERICAN INSTITUTE.

A MEETING of this Association was held on Tuesday, May 31, 1864, at 8 o'clock P. M., at the rooms of the Institute, in the Cooper Union Building, N. Y.

After the usual preliminary business was transacted, the President remarked that

he noticed a very beautiful bouquet on the table, and its style clearly indicated from whom it came. He called on Mr. Wm. R. Prince for a few remarks on the flowers of which it was composed.

Mr. Prince said the flowers were cut promiscuously that morning, at the suggestion of the Secretary. They are all herbaceous plants, which are now beginning to bloom. The principal part of these flowers are the *Pæony*, of which there are a great many varieties, but the majority of them are natives of Tartary, Japan, and Pekin, the northern part of China, which is nearly in the same latitude as this city. The cultivation of these flowers here does away with the impression that gorgeous flowers appertain to the tropics. There are few better flowers than the Chinese *Pæony*. There are perhaps one hundred kinds of them that have odor. Some may suppose they are roses. Most of the old *pæonies* are scentless. One variety is called *endulas*, in consequence of the root being used as food in the southern parts of Europe, particularly in Spain. There are two or three species of the *Pæony* in the Levant, and also in California.

The tree *Pæony*, is supposed by many to be too tender for out-door culture, and is thrust into pots, whereas it ought to be put in the coolest place in the garden. It will flourish as well on the ramparts of Quebec as here, and the reason it fails with amateurs is, that they take too much care to put it in a sunny place.

Mr. Mead said he noticed some desperate looking branches on the table, and suggested that Dr. Trimble say something about them.

Dr. Trimble said he had no doubt that most of those present were aware that the cherry crop, that is, of the very fine kind of cherries, will be very deficient this year. The trees blossomed as usual, but the long-continued wet weather, and heavy showers caused the petals of the blossoms to decay and fall off. This, with the lengthened wet season, giving them no chance to dry, they rotted, so that the crop

of good cherries is entirely destroyed. The pear and apple were in blossom at the same time, and much of these fruits will also fail; but there are some good apples that have been saved. This is a branch of a very fine kind of French cherries that have been destroyed, in his neighborhood this season. The apple trees this year, of which we have here a specimen, at one time were in this condition. On examining closely the leaves, the Aphis, that scourge of the rose bush, was found there, and their destruction of the early leaves has diminished the crop very materially. Here are two branches of the apple tree, and they all present this appearance. This is due to the ravages of the well-known canker worm. In New England nearly all the leaves of the early trees have suffered from them; but the worms have since fallen to the ground, as this season there were more leaves than the worms wanted.

The aphis, which is the most universal of insects, and one that increases the most of any, has an enemy in the lady-bug. You can scarcely take up a bud but you will find some of these bugs in search of the aphis. He had sometimes fed these lady-bugs with the aphis placed on the point of a knife, and this season he was enabled to discover that these insects have a particular fancy for the snowball flower. When this flower does not flourish, if the leaves are examined, they will be found to be perfectly alive with the aphis. There is a prevailing opinion that the different color of these insects is owing to the food they eat; but microscopic examinations showed them to be of different species. Birds are very fond of them, and I have known of an instance where the snowball appeared to be almost entirely destroyed, when the birds came, and they picked off all the insects, and after that they flourished very luxuriantly. The birds that feed on these insects are very numerous; all those charming birds that remain with us but a few days, and then go further north, such as the warbler, oriole and cedar bird, are their enemies. If our pub-

lic parks are visited, the shrill notes of the cedar bird are heard. They are great friends to us in destroying these insects.

He had here, in this bottle, some three or four specimens of the curculio, that enemy of the fruits of our country. He did not know of many bugs or birds that fed on them, but he found that the oriole does, and they are probably the food of those kinds of birds that feed on beetles.

Mr. Wm. R. Prince then read the following:

The grass specimens sent to the society by Mrs. Mary Treat, of Iowa, are:

Hierochloa borealis, Seneca grass or Sweet Summer grass, described by Torrey & Gray, and in Eaton's Manual of Botany. It is perennial, and found abundantly in the Newark and Hackensack meadows, in the environs of Seneca lake, and in many localities in the western states. It is remarkable for its sweet and pleasant odor. It is a native, creeping species, and spreads rapidly. In the eastern hemisphere, however, they possess a grass of a distinct genus, which presents a counterpart of our own Seneca grass, as to character.

The *Anthoxanthum odoratum*, or Sweet-scented Vernal grass, which has a similar sweet and agreeable perfume. It is a native of the northern countries of Europe, and for the simple circumstance that it is an exotic and far-fetched, it is much cultivated in the flower borders of our gardens, while acres of a native grass, of a similar and in some respects of a superior character, which absolutely surround this city, are passed by daily, unnoticed and unknown.

The subject of the evening, "Early Fruits," was then considered.

Mr. Wm. S. Carpenter said, he was passionately fond of fruit culture, and took a deep interest in the improvement of flowers. We see every season what great improvements have been made in flowers all over the country by the horticulturists, and the improvements of different kinds of fruit that were originally worthless. This would go to show that they were left by

the Creator for man to cultivate and improve. Some persons, who see these bouquets on the table, may think that the flowers were made so originally by nature, but they would scarcely be recognized as belonging to the original. It was so with the wild crab apple and native strawberry. These fruits were made what they are by cultivation and by crossing. An advantage we have over former times is, that we are not now confined to fruits that grow in our neighborhood. Who is there now that is satisfied with tasting fruit raised in his own country? We have before us flowers, most of them came from Europe; some from Japan and China. This latter country has contributed largely in flowers, but little in fruit. Perhaps France has done more for the cause of horticulture than any other country. He had within the last few years endeavored to collect the fruits of that country, and now had in his possession most of the fruits that are approved there, and the possession of which is ample compensation for all his labor in collecting them. He felt a pleasure in working among the trees that are yearly producing their luscious fruits, not only for the good they afforded him, but for the pleasure he derived in distributing them among others.

P. B. Mead then made some remarks on the strawberry. There is a class of cultivators who look upon its culture entirely with reference to profit, while with the amateur it is a matter of pure taste. An amateur who grows strawberries only for his own table, wants a tender, juicy, high-flavored berry; and if size and beauty are added, so much the better. For his own part, he would prefer a moderate crop of Burr's New Pine, to bushels of Wilson's Albany. He was becoming rather nice in his taste, and would choose a little that is good to a great deal that is bad. Amateurs would select high-flavored berries, and turn over the Wilson to those who grow for the market. Now is it good policy for horticulturists to pander to uneducated tastes? or should they not rather

aim at a higher standard? One of the objects of a Horticultural Society, like this, is to establish a standard of taste. The public buy fruit with the familiar names without much regard to quality, and are often imposed upon.

The Bartlett is a good pear, and people know it to be so; but the uneducated are often imposed upon by persons selling inferior pears under the name of Bartlett. The people need information such as they can only obtain by attending Horticultural meetings and fruit shows. Dealers in fruit constantly deceive, instead of instructing the people. The summer Bon Chretien, an inferior pear, is often sold in this city under the name of Bartlett. People need to be educated by the eye and taste. He gave half of a pear to an individual, telling him it was the Bartlett, which he pronounced to be very fine; then he gave him the other half under another name, which he said was not near as good as the first. He ventured to say that examples of this kind are very common.

There is a great diversity of opinion in regard to the foreign strawberry. He was inclined to think that they are not adapted to our country. The Triomphe de Gand, La Constante, and a few others, he had seen grown very successfully here, but there was no foreign strawberry that will compare with our own native varieties for hardiness. It is not underrating foreign strawberries to say that they will not suit our climates. He had at one time 360 different kinds of strawberries. Many of them were from abroad; but he found that most of them required a great deal of nursing, more than he wished to give them, and after two or three seasons he threw many of them out, and he would advise others to do so, and replace them with our native varieties. The soil that he found best adapted to the strawberry and fruits generally, was one abounding in carbonaceous matter, such as muck, decayed leaves, &c. This is Nature's pabulum; it is that on which she nurses her first-born; it is that upon which she builds her forests,

and upon which she feeds her choicest productions. What is wanted is a light, carbonaceous soil, and a little manure with it. The carbon can be got into the soil in the form of muck, leaves, charcoal dust, etc.; the manure should be old and well rotted. With such a soil there would not only be an abundance of fruit, but also of good quality.

ORNAMENTAL TREE PLANTING.—In traveling through the states of the Union we find that all other kinds of improvements take the lead of ornamental planting. The eastern states afford many fine examples of perfected skill in landscape gardening, but, as we go west, these instances become more and more rare. We once drove many miles through different parts of a western city, containing beautiful buildings and many thousand inhabitants, in order that we might be refreshed with the sight of a garden, but not a single one truly deserving the name could be found. No wonder that Lord Bacon should have remarked, centuries ago, that “when ages arrive at civility and elegancy men come to build stately sooner than to garden finely, as if gardening were the greater perfection.”

We should like to show some of our countrymen who appear to hate or despise trees, what kind of an earth we should have without any, by placing them for a moment in the midst of the great Desert of Africa, where all they could see would be “a wild expanse of lifeless sand and sky.” We think they could hardly avoid admitting that the coolness of a shady grove would be preferable.”

The practical conclusion to which we arrive is—1. Be extremely cautious in cutting down a tree. It has, perhaps, been a century in growing, and it will require another century to replace it. 2. Do not procrastinate in tree planting—put off any other work, but do not neglect this, because every year lost is an equal loss in refreshing beauty to every man's life. Get the trees started, and then they will grow while other matters may be attended to.

In a few days the time for planting will have arrived—make your arrangements, and be ready in season.—(*Country Gentleman.*)

DEAR FRIEND OF THE HORTICULTURIST,—About a month since I saw announced in your journal, and also in another, a book entitled, “Flowers for the Parlor and Garden,” and favorably noticed. I was induced to get it. I have read it. Shall I tell you what I think of it? The man that wrote that book has a heart; not a little, pinched, dried-up thing, but a heart that throbs nobly; that comprehends the rights of women; a heart to teach the uninformed and give them knowledge, hopes, aspirations, and promises for the future. He has understanding also. He knows that the beautiful tinted papers and delicate sheets of wax are useless in a lady's hand, unless she is instructed how to use them; and, to be homelier, is aware that our worsted stores would never flourish did not the pretty German girls patiently give their time and taste to teach the stitches and select the colors, and has come to the conclusion that it is the want of knowledge which has kept flowers, with their “sunny light and ennobling influences,” from our rooms, instead of a non-appreciation of their beauty. Now I know why my Camellia buds stayed so long *in statu quo*. I gave them water once a fortnight, for fear that I might come under the head of that class of ladies who fed and watered their plants to death. I shall now know what to do with my poor rose bush that came from the florist's last winter so full of bloom, and has nary a bud now, and I have new courage to grow some violets. I mean to have six roses instead of one, and a pink and red Camellia, besides my white one. I shall try new seeds, bedding plants, and shrubs, not minding cost or trouble, if success such as a woman has a right to expect crowns my efforts. Remember, my dear friend, this is strictly confidential; for if I should not succeed I may not wish the world to know I am too stupid to un-

derstand things so plain that "he that runs may read."

Yours truly, **WOMAN'S RIGHTS.**

NEIGHBOR JACKWOOD.—A novel by J. T. Trowbridge. Published by J. E. Tilton & Co., Boston. Price \$1.75.

LITTLE REBEL.—A very well written story for children. Published by Messrs. J. E. Tilton & Co., of Boston. Price 75 cents.

WAX FRUIT AND FLOWERS, and how to make them. Published by J. E. Tilton & Co., Boston. Price \$1.50. This work gives carefully prepared and illustrated instruction in the art of making wax flowers and fruit, with new methods of sheeting wax and modelling fruit. It treats the subject in a thorough and concise manner, and is a valuable guide in this department of Art, enabling one with study and care to become an expert. Making wax flowers is not only first rate practice for those who desire to become practically acquainted with the form, color, and arrangement of flowers, but is a profitable pursuit in a money point of view. The typographical skill and beauty displayed

in this book are characteristic of Messrs. J. E. Tilton & Co.

LOWER CANADA AGRICULTURIST.—Published at Montreal, under the direction of M. J. Perrault, member of the Provincial Parliament, and of the agricultural schools of Grignon, Seine, and Oise, France, and of the imperial Zoological Society of Paris, &c. This paper appropriates regularly whole pages of the copyrighted articles of the Horticulturist, even to the Monthly Calendar, without the slightest credit.

COUNTRY GENTLEMAN.—Published weekly, 16 pages quarto, by Luther Tucker & Son, Albany, N. Y., \$2.50 instead of \$2 per annum. As this sterling agricultural journal has, we were going to say, raised its price, but such is not really the case, we shall hereafter require four dollars to be sent to us when clubbing with our magazine. The price of the Country Gentleman should have been made \$3.00, and at this price should be seen upon the table of every Farm House in the land. We commend it to all as a Journal of great merit and a profitable investment for every one who cultivates the soil.

Correspondence.

PORT HENRY, N. Y., June 10, 1864.

EDITOR OF THE HORTICULTURIST: In your June number I notice your correspondent, "Pratiquer," says he wants to be enlightened in regard to the Adirondac grape, its origin, hardiness, &c., and whether I or any of my family have set out any vines on that strip of ground, &c.; and he says, "I have examined the leaf of the plant sent out by Mr. Bailey, and must say that to me it has the appearance of the *Vitis Vinifera*."

I will answer briefly.

The narrative given by Mr. Bailey, when he first introduced the Adirondac to the

public, of its discovery and supposed origin, is a true statement, as I gave the facts to him at the time; and no subsequent facts have come to my knowledge to change my belief. As to its hardiness, I will say that fact related, of the young shoots killing back the first winter, I do not regard as evidence of its being less hardy than *Isabella*, *Delaware* or *Concord*; for I have never found a yearling vine of either of these kinds to stand the winter here. It is my practice to cover my vines for winter. I give the Adirondac no better protection than the others, and have observed no difference in regard to the

hardiness. I have planted no vines in the immediate vicinity of the original Adirondac.

In your reply you give hearsay information which might be important if true, but it is deficient in that essential quality. Mrs. Witherbee did not raise it in a pot from seed taken from a raisin; nor had she anything to do with its production; and it is not true, as *you have further learned*, that these facts have been known from the beginning to those interested.

Please be kind enough to give the truth the same circulation-as you have given to the error.

Yours truly,

J. G. WITHERBEE.

NORFOLK, CONN., June 2, 1864.

EDITOR HORTICULTURIST:

Dear Sir: Permit me, through your columns, to give the result of my experience thus far, with the Adirondac vine, to the public. I have now had about fifty vines through two winters and one summer. With me, in the Northern part of the State, and one of the coldest towns, it is perfectly hardy. I find it a vigorous grower, and never a leaf yet has shown the least mildew. Perhaps you will call me an interested party; but I have just the same amount of interest in the Iona, Isabella, Creveling, &c., and *no more*.

A gentleman in Norwich, Ct., writes me that he fruited the Adirondac last season, and speaks in the highest terms of it, saying that in his opinion, "it stands first on the list of hardy grapes." I can not see why the Adirondac should not be permitted to have a fair trial, and prove its good or bad qualities, without such effort being made to prejudice the public against it in advance.

Yours, J. W. CONE.

WHITE HALL, ILL., June 1, 1864.

MR. EDITOR:—Seeing many articles from western grape growers disparaging the claims of the Delaware grape, I have thought to give you my experience, as, so far, it differs so materially from most others. The spring of 1863 I procured

one hundred and twenty-five Delaware, (one year old, small roots.) During the dry summer I lost a few vines, the fault being in the vines. From the rest I obtained an average growth of five or six feet of good, well-ripened canes; cut them back in November to about four eyes, and covered them, except a few, which I left uncovered to test them. We had a severe winter, thermometer sinking to 28 degrees below zero. I found my Delawares all right, even those left exposed. Rebeccas also stood the test. Another, supposed to be the Anna, was not injured. Diana, Herbemont, Hartford Prolific, Isabella, Catawba, and several other varieties killed to the ground, where uncovered.

At this writing my Delawares, growing two canes, have made from three to four feet growth, and are setting from two to six clusters of grapes. They are remarkably vigorous and healthy—as much so as any of some eight varieties grown by me.

I will give you some results in future.

B. G. CULVER.

ELSAH, Jersey Co., Ill., Jan., 1864.

EDITOR HORTICULTURIST,—We have had a very pleasant week at the Missouri Horticultural Society. The show of Wines was unusually large, and by experienced tasters the vintage of 1863 was pronounced to be of the very best quality. The Committee on Wines proceeded to classify the wines as follows: White Wines, Red Wines, Mixed Wines, and Sweet Wines. Of the White Wines, "Delaware" was pronounced best, one sample only competing with other wines of this class. Red Wines, "Clinton" best, though we had some samples of "Norton's Virginia" that were hard to beat. Mixed Wines, a wine made from equal parts of "Concord" and "Norton's Virginia," was pronounced of excellent quality, and holds out inducements for others to experiment in this way. Sweet. The "Cunningham" was an excellent "sweet wine," suited to the palates of the ladies.

Yours truly,

JAMES E. STARR.

THE
HORTICULTURIST.

VOL. XIX.....AUGUST, 1864.....NO. CCXVIII.

THE SIGNIFICANCE AND DIGNITY OF COUNTRY LIFE.

WE hear a great deal of vague and loose talk about the beauty of the Country and the delights of COUNTRY LIVING among persons who have had very little experience of the latter and who possess very little capacity for the enjoyment of the former. It is one of the requirements of fashion or custom for the better-to-do class of our citizens to spend a portion of the season either at the sea-side, or in the upper country; and with many of them this custom has become a necessity, and positive advantages accrue to them physically, if not morally, in the change of air, objects of interest, and modes of living. Considerations of health, also, induce many families to repair to the country, where the children, emancipated from many of the city restraints, and let loose to a wider range of the free air and bright sunshine, undoubtedly thrive better, in every way, than they could possibly do in their narrower city homes.

Most of this large class of our citizens who go wandering up and down at watering places, fashionable mountain resorts, and rural seclusions, "seeking rest, and finding"

—*what they may*, are obliged to resort to hotels and summer boarding houses, where they are necessarily deprived of many of the comforts of home, such as adequate house-room and comfortable privacy and retirement. And still, notwithstanding all these privations and discomforts, they return to their city homes in the autumn much benefited, on the whole and in various ways, by their *raid* into the rural districts.

But this, we take it, is not what is meant by country living; nor is there in these instances any real appreciation of the meaning or dignity of Country Life. To appreciate them, one must *live in the country*, with all the appliances and comforts of *home* about him; not as a visitor or an occasional sojourner, but as one "to the manor born."

It is not impossible, we fully comprehend, for the citizen—the *habitué* of pavements and avenues—to enjoy in brief and occasional visits, the beauty and freshness of the country, and his enjoyment is not merely poetic and ideal. With true and profound appreciation he looks upon

"the skies, the clouds, the fields,

Entered, according to Act of Congress, in the year, 1864, by Geo. E. & F. W. Woodwans, in the Clerk's Office of the District Court of the United States, for the Southern District of New York.

AUGUST, 1864.

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The happy violets hiding from the roads,
 The primroses run down to, carrying gold,—
 The tangled hedgerows, where the cows push out
 Impatient horns and tolerant churning mouths
 'Twixt dripping ash-boughs,—hedgerows all alive
 With birds and gnats and large white butterflies
 Which look as if the May-flower had caught life
 And palpitated forth upon the wind.
 Hills, vales, woods, netted in a silver mist;
 Farms, granges, doubled up among the hills,
 And cattle grazing in the watered vales,
 And cottage-chimneys smoking from the woods,
 And cottage-gardens swelling everywhere,
 Confused with smell of orchards."

And seeing and feeling all this, he enjoys it with a keen sense of what is charming and transcendent in nature, fully sympathising with the gentle poet, and comprehending with her that "God is with us on the earth," and that the richest gifts of His hand are to be found where He has most profusely bestowed them, in the broad, open and smiling country.

But to know how to live in the country is quite a different thing, and sure we are that it accords with the experience of many a man who has abandoned the busy marts of trade for the delights of a country home, that in this matter "ignorance is" not "bliss."

There are certain conditions necessary to the due enjoyment of life in the country which ought not to be overlooked by those who propose to retire from business.—Among these we may mention two as absolutely essential—society and adequate employment.

We have inherited from our English ancestry a love for rural employments and a taste for rural beauty. The successful statesman, professional man, merchant, tradesman and mechanic,—all look forward to the period when they can retire from the more absorbing duties of their callings, and in communion with nature, enjoy that repose with which they have long desired to crown their declining years. But there are social natures, and they have long been accustomed to the delights and incitements of social intercourse. Set these men down in a retired country home, surrounded, if you will, with all that is lovely and picturesque, or grand and sublime, in scenery—woods,

streams, mountains, valleys—a perfect Arcadia—but without the charms of society to which they have been used, and even the glorious country, with all its beauty and inspiration, will soon become dull and prosaic. Books are a great resource for cultivated minds. Literature affords many inspirations and gratifications. But all these charms, even, will become wearisome and insipid without congenial society, the sympathy and friendly attrition of other minds with our own. But the seclusion of the country does not imply, of necessity, the absence of society; if it did, it would be manifestly unsuited to the most cultivated minds. All over the land there are neighborhoods where this genial and agreeable social intercourse may be enjoyed. Let the man, then, who is seeking a comfortable country home, provide that these refinements and gratifications of social life shall not be wanting. Pure air, bright sunshine, flowing streams, breezy hill-tops, charming reaches of landscape, excellent roads, trees, flowers, fruits—the whole garniture and glory of the perfect country—are all good and desirable, but to every mind capable of appreciating and loving these things, society is an indispensable need. Even at the feet of the Delectable Mountains, or in the "Plain of Jordan that was well-watered everywhere, even as the garden of the Lord," we must have friends about us to share our pleasures, to sympathize in our tastes, and to enjoy with us the delights of home.

Not less needful to the full enjoyment of rural life is suitable employment, which shall absorb a due proportion of our time, and impose a due burden of care. There are two mistakes to which men of active lives are liable on their retirement into the country. One is in providing nothing to do, and the other is in laying out too large an amount of work. The American people are somewhat ambitious. We have never had in our employment a raw lad from the Green Isle who did not profess to understand any and all kinds of work, or who would acknowledge his ignorance of the uses of any implement or tool of hus-

bandry, even if it happened to be yesterday's product of the inventive Yankee brain—and we have had some experience with this worthy class of able-bodied men of fresh importation. The home-born native American is, in that respect, very like the foreign-born. Your New York merchant or mechanic, who has been employed all his life with cotton-bales and their products, or with brown stone and mortar, retires to the country and commences farming on a large scale. He knows little or nothing of the composition of soils, or the nature of seeds, or the laws of vegetation. He may have had some experience with stocks in Wall street,—Bulls and Bears,—but precious little with farm stock, except through the medium of Washington Market. He is over-confident of his agricultural aptitudes and abilities. He undertakes too much. He produces grain and vegetables and other farm products at *gold* prices; they bring in market *greenback* prices. His farming is not a profitable speculation, estimating it by money values, or by the satisfaction it brings him, or by any other standard, and he becomes disgusted with the whole thing, and concludes that the country is a humbug, that country life has no dignity, and its only meaning is "vanity and vexation of spirit."

And his estimate is correct, as far as he is himself concerned. He has made an enormous mistake, and the best thing he can do is to sell off his extra five hundred acres, turn his full-blood stock into Ten-Forties, discharge his numerous staff of Irish farmers, subscribe to the *HORTICULTURIST*, and confine his attention to the "farm of ten acres" he has remaining from his original domain, and employ his time, and the labor of his one faithful man-servant, in cultivating flowers for his wife and daughters, and raising peas and strawberries for the New York market. He must have employment for his hands and for his mind, and centres for his social sentiments and affections. He may have all these with his house, his garden, his graperies, his stable, his poultry-yard, his fish-pond, his dog-kennel, in his modest, well-selected library,

around his own hearth-stone, and in the interchange of loving, manly charities and social sympathies. Country Life, if rightly comprehended, has a serious significance and an exalted dignity. "To those in whose nature is implanted a sentiment that interprets the tender and the loving, as well as the grand and sublime lessons of the universe," a country life is "a life full of joy and beauty and inspiration."

And there is no land, we believe, on which the blessed sun shines in all his course, more beautiful than ours, with larger capabilities for that excellent culture which will secure suitable country homes for the American gentleman. We have, as yet, only begun to develop these inexhaustible resources. Our rural improvements, our landscape gardening, our domestic embellishments, are as yet in their infancy. England, with her hundreds of years of careful and expensive cultivation, her exquisite taste in rural art, her immense wealth of the comparatively few landed proprietors, which is freely and lavishly expended in keeping up and improving her country estates, is far before any other land in the beauty and perfection of her country homes. Years and improving taste in rural affairs must do much for us, as much has been realized in the few years past. With the restoration of the peace and integrity of our land—for which she has our earnest prayers—we can anticipate what may be accomplished in the coming twenty years, by remembering what has been done in the past two decades.

"Who ever lives true life, will love true love.
I learnt to love that England. Very oft,
Before the day was born, or otherwise
Through secret windings of the afternoons,
I threw my hunters off and plunged myself
Among the deep hills, as a hunted stag
Will take the waters, shivering with the fear
And passion of the course. And when, at last
Escaped,—so many a green slope built on slope
Betwixt me and the enemy's house behind,
I dared to rest, or wander,—like a rest
Made sweeter for the step upon the grass,—
And view the ground's most gentle dimplement:
(As if God's finger touched but did not press
In making England!) such an up and down
Of verdure,—nothing too much of up or down,
A ripple of land; such little hills, the sky

Can stoop to tenderly and the wheatfields climb;
Such nooks of valleys, lined with orchises,
Fed full of noises by invisable streams;
And open pastures, where you scarcely tell
White daisies from white dew,—at intervals
The mythic oaks and elm-trees standing out
Self-poised upon their prodigy of shade,—
I thought my father's land was worthy too
Of being my Shakespeare's."

Such are the pictures of English scenery,

and the intimations of English life, which are presented by the poets. The years may come when American literature, moved by like inspirations, and furnished with as exalted themes, shall chant to listening ears in numbers as sweet as these, the beauties of American landscapes, and the happiness of American Rural Life.

COLD GRAPERIES FOR CITY LOTS.

WE illustrate this month three graperies, designed and constructed by us for Mr. John H. Sherwood of this city, which are among the first, if not the first erected in New York as an elegant, substantial and attractive ad-

dition to three very superb palatial residences on Murray Hill, near 5th Avenue. These latter are buildings, such as, in style and workmanship, very few persons in this country, outside of New York, have seen,

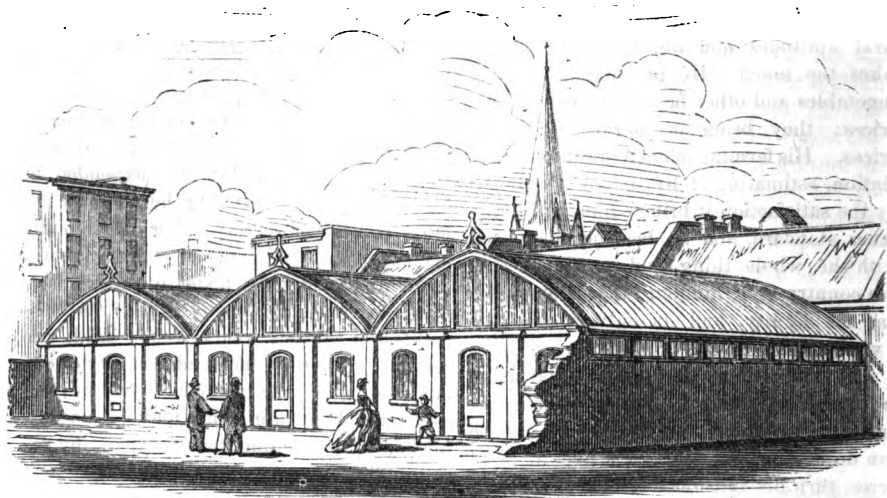


Fig. 1.—Perspective View.

and such as but few of the first class builders of New York are competent to erect.

Centrally located in the aristocratic portion of a city noted for its wealth, taste and influence, these Graperies will be carefully watched as an index of what the future may do in the increased demand for houses on city lots for Horticultural purposes.

A full sized lot in the city of New York is twenty-five feet wide by one hundred feet in depth. The ground attached to each dwelling in this case is equal to two full sized lots, being twenty-five feet wide and

two hundred feet in depth. The dwellings front on Fortieth Street, behind which are the yards, twenty by twenty-five feet; then



Fig. 2.—Plan.

the Graperies, which are twenty-five feet by forty feet; then the coach houses, which front on and are entered from Thirty-ninth Street, thus using the whole space.

The graperies are intended to be used without heat; but whenever desirable, heating apparatus can be easily introduced, and the grape season materially lengthened. For practical purposes only, and on open grounds, it would, perhaps, have been better to have built the houses lower; but as grapes are usually fruited next to the glass, the principal objection to high houses for grape culture is the extra labor in getting up to the vines for pruning and training. These houses are purposely built higher than is now usual, to give a finer effect from the drawing-room windows, and to secure, as far as possible, the influence of the sun's rays.

By the use of glass houses on city lots much enjoyment may be had by all who have a desire to spend their time in growing fine fruits and flowers. Pot vines and trees condense a vineyard and orchard into a wonderfully small space, and border vines yield a harvest of glorious fruit that surprises all not accustomed to seeing and eating such luxuries. Our city lots, with rare exceptions, are well adapted to the growth, under glass, of grapes and orchard fruit, and the forcing of vegetables. There are many of them somewhat shaded during portions of the day, yet the better protection is something of a compensation, and besides that, it is still an open question whether sunlight is alone essential in perfecting fruit; daylight in many cases does pretty well.

The failure to receive the sun's rays from its rising to its setting would not deter us one moment from the erection of a horticultural building. Those who grow fruit where all conditions are most favorable to success, do not enjoy the same pleasure nor attain the same skill as those who battle with difficulties; success easily acquired has not the same value as that success which is reached by persistent effort against adverse circumstances.

Unlike the garden of a country gentleman that blossoms and fruits and passes away in a season, the horticultural building properly heated is a perpetual pleasure, a garden the year round; vegetables and fruit and flowers follow each other without intermission.

Very much is due to the foresight and energy of Mr. Sherwood, in inaugurating the introduction of horticultural structures of this class in New York. Few gentlemen of wealth have had the same opportunity, and few less would have the courage to take the first bold step in this matter. It cannot, however, by horticulturists, be looked upon as an experiment, however much those inexperienced in such matters may be disposed to criticize.

We are sure that Mr. Sherwood has done something that will advance the cause of Horticulture, and equally sure that he will be successful in the result. We shall feel much interest in his progress.

THE INFLUENCE OF THE CENTRAL PARK UPON PUBLIC TASTE.

WE have in the city of New York a Park embracing an area of eight hundred and forty-three acres, of which one hundred and seventy acres is water surface. This includes the two Croton Reservoirs, one of which is a beautiful artificial lake, covering more than a hundred acres,—smaller lakes, which are the winter skating ponds, ornamental basins and pools.

The natural surface of these grounds was so broken and varied that by the aid of artificial appliances,—grading, excavating and filling in—the most picturesque and charming effects have been produced. In this re-

spect we believe the Central Park in unsurpassed by any of the magnificent parks of the same size in Europe.

It is only seven years since this enterprise was undertaken. The Board of Commissioners was organized in May, 1857.

It is not our present purpose to array the statistics of the Central Park, or to enter into the interesting details of the progress and management of the Commission, by which such beautiful and complete results have been attained. Such details would be, undoubtedly, matters of great interest to all who are concerned with the progress of ru-

ral art and embellishment, and with various departments of natural science, which must be embraced sooner or later in the plans of the Commission. We propose to avail ourselves of some future occasion and of the information and materials which have been kindly proffered, to lay before our readers a sketch of the history, development and results attained. It is enough for our present purpose to say in a general way, that the improvements have been designed with exquisite taste, and carried out with a thoroughness which is rarely met with in such work in our country. The avenues, roads and walks, the bridges, the ornamental structures, both those in solid material and the more perishable rustic work,—are so nearly perfect in design and execution as to afford little opportunity for criticism. The planting has been done in so thorough a manner that very few trees or shrubs fail to grow with wonderful thrift. The grouping and massing, according to the most approved principles of park and landscape culture, may be regarded as completely successful, and the Park is already a marvel of beauty.

The point of view from which we choose now to regard this subject, is the influence which such an institution is likely to exert upon the culture of the public taste.

According to the last published Report of the Commissioners, from four to five million persons visit the Park every year. These persons are of all conditions of life and from all parts of the country, and of course of all grades of education and culture. Every one who visits the city, for purposes of business or pleasure, avails himself of the opportunity to explore the Park. He finds here the most substantial and elegant structures and the highest condition of cultivation and keeping. The laying out of the grounds, the planting, the variety of trees, plants and shrubs, the treatment of the landscape, the picturesque features of the surface, the intermingling of rock and water and green turf, of evergreen and deciduous trees, of trailing vines and low-growing plants,—all these arrest attention, and create a degree of interest in the whole subject of rural art, such as the visitor had,

probably, never before experienced. He possesses a real love of nature and an admiration of the varied forms of beauty. But this sentiment has not yet been developed into a pure taste, for want of opportunities and means of culture. Here he finds examples of correct taste. If he owns a country place which he wishes to improve, he will carry away from the Park some information which will be available in laying out his own grounds. He will learn here, without effort or study, how to construct his roads and walks, how to lay down his lawns, how to plant his trees, so as to avoid stiffness and formality, how to arrange his shrubbery and flowers in such way as to secure the best effects. Of course all this will not come of a single visit to a single park. A correct taste is not so easily cultivated. There needs be an observation and study of many good models as well as the perusal of good books which treat of the principles of taste and of landscape construction and adornment. But every visit to the Central Park will assist in the formation of taste. The thoughtful man who really loves nature, will gather hints and suggestions on every side, as he rides or walks, or reposes in the refreshing shade, and he will go home to put these suggestions into practice, on a limited scale, indeed, and with fewer appliances of wealth and artistic skill. And so, on the principle of imitation and emulation, a taste for rural improvement will extend, the pleasant infection will spread from neighbor to neighbor, and the whole country will feel the impulse which the high culture of the Central Park has given to rural improvements.

There is no exaggeration in this statement. The whole history of rural affairs in this country for the last twenty years, shows the action of this principle of imitation. Good models in architecture,—in any art,—must improve the public taste, and the more good models are multiplied for the imitation of the public, the more rapid will be improvement in refinement and culture. There is wealth enough among the people, and public spirit enough, if we can keep the impulses to progress and improvement suffi-

ciently active. Who can doubt the influence of the Central Park in supplying these impulses and in furnishing these facilities?

The chief occupation of our people is the cultivation of the soil, and the products of the field and garden and forest form the great volume of our exports and the basis of our internal commerce and industry. Horticulture is already an important interest among us, and becoming more so every year as our cities increase in population and the demands for the products of the garden are multiplied. Improved methods for the production of fruit, vegetables and flowers, while they increase the supply, barely enable the producer to keep pace with the increased demand. There is a ready market to-day in any of our cities, for hot-house fruits, at prices which would have astonished our most extravagant predecessors, grapes and peaches, nectarines and apricots, together with a large variety of culinary vegetables, all of which have been forced under glass for our early markets, are daily found upon our tables, while in the one item of cut flowers, as we have shown in our late numbers, the

citizens of New York expend thousands of dollars every year.

Certainly we do not expect the Central Park to furnish us examples of this sort of culture for the supply of our table luxuries. But we are sure that the best and most approved methods in horticulture, landscape gardening, etc., which are there exhibited, will not only supply us with practical and available knowledge on these subjects, but will largely cultivate the public taste for these elegant and wholesome pursuits, and stimulate to a healthful competition. Country life is the perfection of living to the happy man who knows how to live in the country, who has the taste and the knowledge requisite to the enjoyments placed within the reach even of the man of moderate means. The influence of the Central Park upon the mind and taste of the millions who annually visit its refreshing shades, and wander by its beautiful waters and through its charming walks, filling their minds full of images and thoughts which will revisit them again in visions of beauty, must, assuredly be a wholesome and happy influence upon the public taste.

NEW WHITE NECTARINE.

It is much to be regretted, that the Nectarine has been almost discarded from culti-

vation in the open air, from its great liability to attack from the curculio, and can

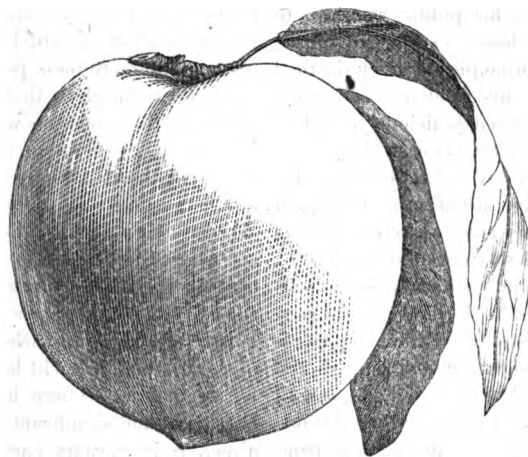


Fig. 1.—New White Nectarine.

only be grown in perfection under glass, where it succeeds even better than the peach.

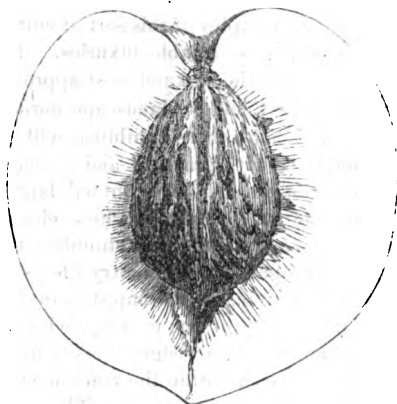


Fig. 2.—Section.

The specimen from which our cut was made was handed to us by Isaac Pullen, Esq., of Hightstown, N. J., grown in his orchard house! Though not of late introduction, it is but little known. We commend it to all who have orchard houses as one of the best of the nectarines, both in quality and appearance. We give Downing's description:

The New White is the finest light-skinned variety, and is a beautiful hardy and excellent nectarine, bearing abundant crops. It is an English seedling, raised by the Rev. Mr. Neate, near London.

Leaves with reniform glands; fruit rather large, nearly round; skin white, with occasionally a slight tinge of red when exposed; flesh white, tender, very juicy with a rich, vinous flavor. The stone is small, ripens early in September; flowers large.

ECCLESIASTICAL ARCHITECTURE.

THE subject of Church Architecture is of peculiar interest and importance, not only because of its connection with the general principles of art and taste, and with the whole matter of public embellishment, but especially as it is inseparably connected with the rites and ceremonies of the Christian Church. It is the duty, therefore, of every person who has anything to do in the erection of edifices for public worship, to make himself, at least, so far acquainted with the general principles of Ecclesiastical Architecture, that his influence and exertions may be directed judiciously, and in accordance with correct taste, so that in the arrangement of a structure designed for sacred purposes, due attention may be paid to its being properly adapted to the celebration of the solemn services of religion.

A thoughtful mind, indeed, must be sensible of a feeling of melancholy at the contrast generally exhibited by the comparison of most of our modern churches with the stately piles erected in the middle ages. In defiance of all the barbarous mutilations and additions to which many of these structures have been subjected from time to time, they still retain a holy and venerable

character—they are still permanent and impressive monuments, bearing testimony to the genius and piety of those who built them.

Undoubtedly the motives and not the actions of men should always be regarded, and so even the sumptuous and lofty cathedral may not be a more acceptable offering of piety than the plain and lowly church, provided its poverty is the result of limited means, and not of sordid and selfish economy. There are men, perhaps, who would persuade themselves that the meanness so visible in the structures with which they are concerned, is a proof of their superiority to the superstitious notions which they falsely attribute to the ancient builders, for having devoted much time and labor on what they are pleased to call useless and unnecessary ornament. But this is a mistaken view of the subject, and we hope and trust the time is not very far distant when the importance of church building will be duly appreciated by the public. There have already been important and significant movements in this direction, in various parts of the country, within the last twenty or thirty years, but we believe there is room for greater im-

provement, and it shall be our purpose to do what we can, consistently with our position, to facilitate this improvement.

In former times the buildings set apart for religious purposes were generally erected from the drawings and under the immediate superintendence of the Ecclesiastics themselves, who sometimes even worked as common laborers for the love they bore the sacred enterprise. They seem to have been anxious that the effect of their edifices should contribute to increase the solemnity of the services for which they were erected, for they were aware, as is said by Hooker, that "the very majesty and holiness of the place where God is worshipped, hath in regard of us great virtue, force and efficacy, for that it serveth as a sensible help to stir up devotion, and in that respect, no doubt, bettereth even our holiest and best actions in this kind."

It is vain, we think, to expect that our sacred buildings can exhibit the same propriety and beauty, unless they are designed in strict accordance with the spirit and intentions of the services to which they are appropriated. Many of our modern places of worship, in consequence of their capricious and inartistic arrangements, are destitute of almost every peculiar characteristic of a house of prayer. Instead of possessing within that calm, quiet and impressive aspect which tends to inspire feelings of reverence and devotion in all who enter their sacred walls, the whole structure has an air of meanness and pretension that is particularly offensive, and at the same time altogether opposed to every sound principle of Ecclesiastical Architecture. The whole atmosphere is secular, and the whole influence irreverential.

On the other hand, the appearance of the old churches of the mother land is often magnificent and imposing; but even when of a plain and simple description, it is impressive and beautiful. There is a spirit in their venerable walls, and a reality about their structure and appointments, that is always gratifying and satisfactory; for however rude may be the materials employed in their construction, there is never any at-

tempt to make them appear other than they really are. The faithful builders, conscious of having exerted themselves to their utmost ability, seem to have felt that any false pretensions would be at variance with the holy character of the service to which the edifice was to be consecrated; and that alone, in their estimation, would invest it with sufficient majesty.

The solidity, also observable in the construction of the religious edifices of the olden time, harmonizes admirably with the purposes for which they were erected; appearing, as it were, to intimate that

"They dreamt not of a perishable house,
Who thus could build."

The irregularity of medieval buildings, united, as it frequently is, with much apparent complexity, is apt to make a mere superficial observer imagine that such designs are not the result of that consideration and forethought exhibited in the works of classical antiquity. But this conclusion is very far from being correct. For although "Gothic Architecture adopted forms and laws which are the reverse of the ancient ones, it introduced new principles as fixed and true—as full of unity and harmony as those of the previous system." And it will be found that a long course of the most attentive and reverential study is requisite in order to be able to imitate with any correctness the stately and magnificent edifices that were erected during the middle ages.

The poet Coleridge has well observed—"The Greeks reared a structure, which, in its parts, and as a whole, filled the mind with the calm and elevated impression of perfect beauty and symmetrical proportion. The moderns also produced a whole—a more striking whole; but it was by blending materials and fusing the parts together."

In the lofty and vast cathedral churches Christian Architecture reigns supreme. In these immense and glorious works our ancestors never spared any expense or labor for their perfection; deeming, rightly enough, that their utmost efforts in the performance

of such honorable works must fall short immeasurably in rendering their offerings in any way worthy the acceptance of the Divine Majesty. The grandeur of design and boldness of execution displayed in many of these structures, may indeed be termed sublime, while the mingled feelings of awe and veneration with which they always inspire the observer, prove them not altogether unworthy of the poetical appellation of "the petrifications of our religion."

The great charm, indeed, of all the ancient churches, consists in their possessing a solemn and devotional character, which at once distinguishes them from every other class of buildings, so that, notwithstanding the different styles and variety of their architecture, they have a certain similarity of appearance, which marks in a very significant and expressive manner, that they are alike dedicated to the same sacred purpose.

These venerable structures, on account of the many sacred and interesting associations connected with them, as well as on account of their beauty and perfect adaptation to the purposes of public worship and instruction, are the best and most appropriate models for similar structures now. And to acquire a correct knowledge of the elements of design in church architecture, and to bring about that "union of genius with imitation," whose productions shall be worthy of being compared with these models, it is indispensably necessary that these beautiful monuments of medieval art should be studied with the greatest care.

But in designing a church, it is by no means sufficient that we borrow the details of an old building, unless we likewise preserve its general proportions and distribution of parts, upon which its characteristic effects are chiefly dependent. In the selection of any particular style, or period of the pointed architecture, it is also of great importance that both the size of the intended structure, and the locality where it is proposed to be reared, should be taken into consideration. Such considerations are often entirely disregarded. But the most glaring defects in modern church-building

—we mean such as really deserves the name—have generally been occasioned by the desire of producing something fine or novel. How often, in a secluded village, where a simple, unpretending edifice would have added grace and interest to the landscape, and to the general surroundings, do we find some incongruous pile erected, which in no respect harmonizes with the neighboring scenery.

It either bears no resemblance whatever to the "shrines of ancient faith," or is a tame, mean and meagre combination on a small scale, and with inferior material, of the various features of the grand and magnificent cathedrals which were built for very different uses, though for the same general purposes. These fabrics, from their immense size and peculiar arrangement, are in no wise fit and appropriate models for parish churches. Yet they must be thoroughly studied and comprehended in all their wonderful details by any one who would make himself competent to the task of designing even the plainer structures which are needed for our country villages and larger towns.

With the hope of returning to this subject in our future issues, we shall close this paper with some extracts which will be found both instructive and suggestive.

"The contemplation of the works of antique art excites a feeling of elevated beauty and exalted notions of the human self; but the Gothic Architecture impresses the beholder with a sense of self-annihilation,—he becomes, as it were, a part of the work contemplated. An endless complexity and variety are united into one whole, the plan of which is not distinct from the execution. A Gothic Cathedral is the petrification of our religion."—*Coleridge*.

"If the science of our ancestors had not been directed and animated by pure taste, high feeling, and strong religious enthusiasm, they would not have handed down to us a series of monuments, extending nearly over the whole of Europe, which will be viewed with admiration for ages. It was a noble idea to dedicate to the service of the Infinite Creator a temple, apparently indefi-

nite in its extent, through which the eye might range without discovering the limit or measure; and the skill with which this idea was worked out meets with no parallel in the best days of classical art."—*Petit's Remarks on Church Architecture.*

"It has been observed as a circumstance full of meaning, that no man knows the names of the architects of our cathedrals. They left no record of their names upon the fabrics, as if they would have nothing there that could suggest any other idea than the glory of that God to whom the edifices were devoted for perpetual and solemn worship; nothing to mingle a meaner association with the profound sense of His presence; or, as if, in the joy of having built Him a house, there was no want left unfulfilled, no room for the question whether

it is good for a man to live in posthumous renown. But come to the mean and petty reconstructions of the interior of our parochial churches, which have been effected within the last hundred years, and we find that they are bedaubed, even if the achievement be no more than the building a gallery, with the names at length, and often in a position of the most indecent prominence, of those, not whose imaginations devised the work, not whose hands fashioned it, not whose offerings bore the cost; but such as have held some temporary parochial office, as have been, for the year, of the unsightly work, some *Fidenarum Gabiorumque potestas*, and thus have been enabled to gratify their vanity in the temple of God."—*Gladstone's Church Principles.*

BEURRE GIFFARD PEAR.

WE do not illustrate this as a new pear, but in order to call the attention of Amateurs to it, as one of the very best pears of its season. If picked just at the right time and house ripened, it is not surpassed by any of the early pears. We have fruited it

now for three seasons and can testify to its uniform excellence.

Tree a straggling grower, requires much and careful pruning to bring it into a proper shape. Shoots of a peculiar reddish color. Fruit buds long pointed. Ripens 10th Aug.

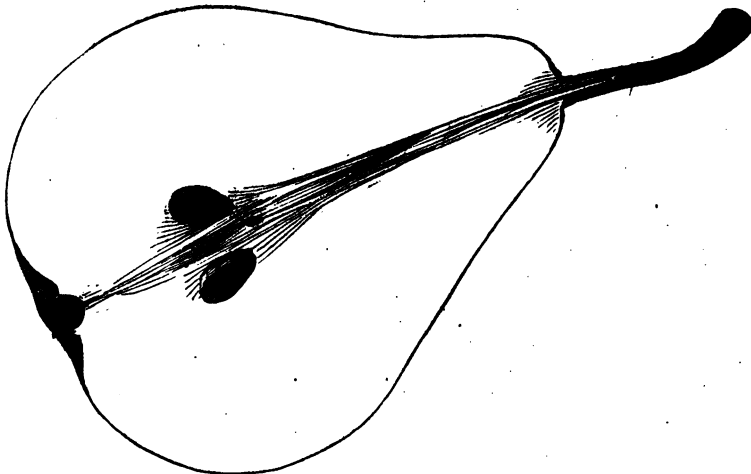


Fig. 1.—Section—Beurre Giffard Pear.

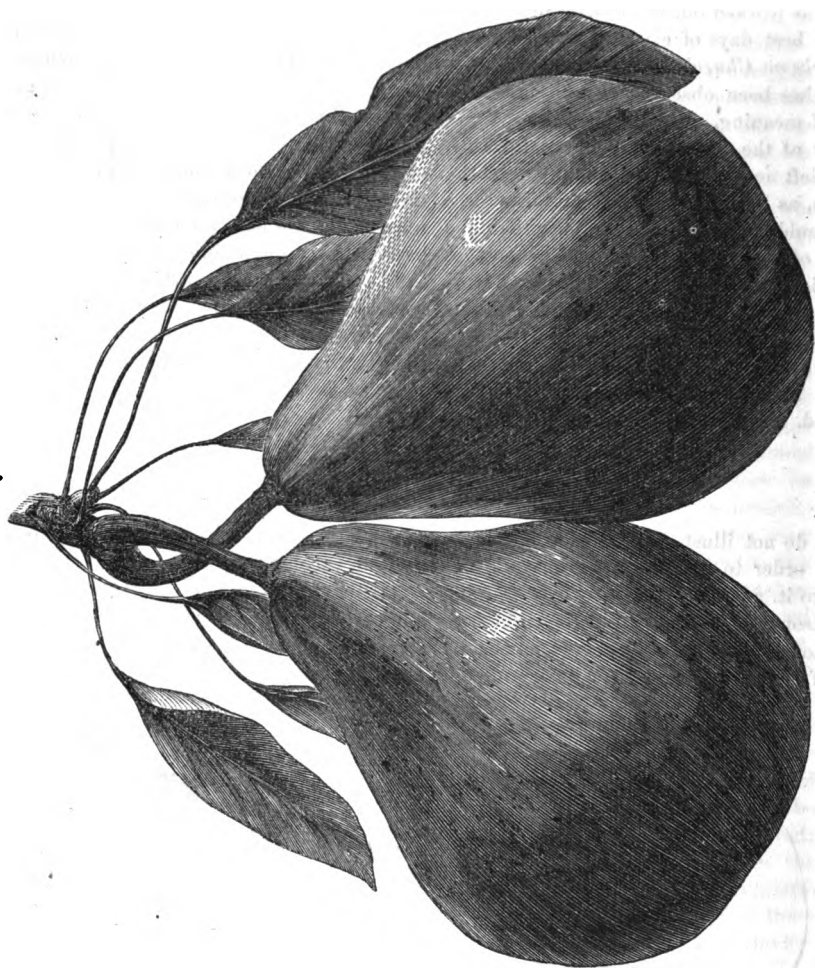


Fig. 2.—Beurre Giffard Pear.

GRAPE GROWING AT NAUVOO.—A parcel of land, consisting of 120 acres, lying on the north side of Nauvoo, was sold a few weeks ago at auction, in one, two, and three acre lots, for vineyard purposes, at rates averaging from \$75 to \$100 per acre. The grape-growers of Nauvoo have realized, from their past year's crop, wine, to the value of \$70,000. A number of grape-growers in

Nauvoo, who, five years ago, had no income except what their daily labor gave them, now have stated incomes from their grape crops, averaging from \$1,500 to \$4,000 a year. It is said not to exceed \$125 per acre to trench and plant an acre of ground with grapes, and the third year's growth is usually good for 400 gallons of wine worth \$600.—*Ex.*

STRAWBERRY SHOW ON THE HUDSON, AT POUGHKEEPSIE.

BY W. A.

SOME weeks since, the members of the Horticultural Club in this city resolved to have an exhibition of Strawberries in June. Last week they carried their commendable purpose into execution. They exhibited what they proposed—*Strawberries* in all their variety of size, taste, color and quality. Competent judges pronounced it a rare show of this delicious fruit, and the members of the Club are satisfied they have done something for the strawberry cause, and gratified an honorable desire to make a successful and handsome show. Certainly, it would be difficult to surpass the kind and quality of fruit exhibited last week in Poughkeepsie. Yet, it must in truth be said, the specimens were inferior to former years, for the crop itself in this region in quantity, if not in quality, has been wholly behind last season. The drought early affected it and limited the crop largely.

It was resolved by the Club to open the Show of Strawberries in their Hall in the afternoon to the public, and in the evening to have a reunion of the members with their friends. People might look at the delicious, tempting fruit during the day, but at night the "tasting committee" should be enlarged, to induce all the members, and those they should invite, to join in this fascinating pastime. To the *Strawberries*, it was promised *Cream* should be added, and nothing more need be said.

Nearly every variety of Strawberry now cultivated was found upon the tables. Not far from a hundred plates blushed with this delicious fruit. Some high-piled and gushing over, and others with a few choice berries of such magnitude as to excite credulity, but of such delicious flavor as to draw forth from refined tastes and lady lips, ejaculations both extravagant and delightful. The favorite seemed to be the "*Triomphe de Gand*," both for its immense berry, its delicious flavor and its generous productiveness. No premiums were offered, but a

Committee decided that the best specimens exhibited were the "*Triomphe de Gand*," Wilson's, Russell's, Downer's Prolific and the "*Shaker Seedling*." Mr. Marshall, an intelligent, enterprising Nurseryman and fruit-grower, exhibited many new specimens. Among them the Committee found the following:

LACONSTANTE—sweet, but not high flavored, good size.

LADY FINGER—a favorite berry in the Philadelphia market, first quality, sweet firm flesh, large size, thimble shaped.

MARGUERITE—solid pulp, not high flavored.

CUTTER'S SEEDLING—medium size, sweet, good flavor.

DOWNER'S SEEDLING—a fair sized berry and good flavor, light color and soft flesh.

JENNY LIND—sweet, excellent quality, early, medium size.

MADAME LOUISE—hardly ripe, flavor quite distinct and peculiar, partly white in color.

DETHURY—fine quality, superior flavor.

It will be seen by the above, that but few of the old fashioned strawberries find favor in this region. Many of them, like the Early Scarlet, Burr's New Pine, Black Prince, Hovey's Seedling, and others, once so popular, were exhibited, but the "*Triomphe*," the Wilson and the Russell seemed to have largely banished them from public favor. That Strawberry which will combine size, flavor and productiveness, is the one people want; and when found, all others must retire before it with intelligent cultivators. Those named above seem to combine largely the desired qualities, and yet perfection has not been reached. Every year new seedlings are brought out, and before long, the small, tasteless, and inferior berries, that even now are cultivated extensively, will be thrown aside and forever repudiated. Size has been reached, but want

of entire sweetness may be urged even now against the best class of strawberries.

The afternoon was enjoyed by the public who visited the Exhibition, but the evening culminated in a crowd of professional and amateur growers of this delicious fruit, and their lady friends. It is almost unnecessary to remark, that while the gentlemen were gathering their most choice and delicious berries for the show, the ladies, with their refined and elegant tastes, were cultivating the sweetest flowers, the most gorgeous, rare, and most beautiful of shrubs, to decorate the tables and the Hall. Both parties were eminently successful. The

Show of Strawberries was a success beyond expectation, while the floral exhibition was elegant as it was attractive and beautiful. The Show having been fully examined and discussed, the President, (a gentlemanly bachelor,) announced that the "forbidden fruit" was no longer proscribed—it would now be offered to the company. Very soon huge piles of delicious strawberries were circulating among the guests, and it is almost needless to say, the welcome ice-cream followed in abundance in close proximity. Thus this beautiful show was made tributary to an elegant taste and a refined hospitality. May it be imitated everywhere.

THE USE OF ORNAMENTS IN LANDSCAPE GARDENING.—NO. I.

It is a trite saying, although perhaps not so strictly true, "that beauty unadorned is most adorned." This may hold good to a certain extent in the instance of the most perfect of all Nature's beautiful works, a beautiful woman, but we are not willing to admit that even in this case, beauty may not be enhanced and set off (so to speak) by the use of chaste and proper ornament—so in other works of beauty; a fine painting for instance, not only loses nothing by the surroundings of an appropriate frame, but is often rendered the more conspicuous and appreciable.

The use of ornament in the Fine Arts, and especially in the Art of Landscape Gardening, which we class among the Fine Arts, is not only defensible, but is practised with great success, and the highest skill is evidenced in the judicious use and management thereof. The trouble is, however, that this is a matter so liable to abuse, and in the which so little judgment and skill is manifested, that we are disposed to cry out with each failure, "Away with your ornament." The most distinguished beauty, may be so overlaid with ornament, or the adornment may be of a kind so meretricious and vulgar as to rob the object of all its pleasing effects. Thus, to go back to our type, what is more repugnant to our appreciation, than the exhibition of a beautiful woman, dressed out in glaring, gaudy colours, without an idea

of what is called taste, and blazoned with jewelry? The old saying here holds good with emphasis; her beauty would be far better off unadorned; but take the same one, and let her be decked according to the æsthetics of dress, with a moderate show of ornament all in good taste, and her beauty will be of the striking and dazzling order: the *tout ensemble* is perfect. Thus in Landscape Gardening, it is a very common and yet a sad sight, to see some of the most beautiful spots, where nature has given large scope to the artist, completely ruined by a display of vulgar, bad taste; nothing studied but how to crowd the place with ornament without the slightest regard to principles of art: statuary crowded in with ludicrous incongruity of subject and fitness; classical vases mingled in with Chinese structures, rustic with finished work; all sorts of styles mingled in meaningless companionship. And this is only one of the many blunders made in this regard. The first great principle to study in this work is "Unity of expression," that is to say, that all the details of the work should be in such relation to each other as to produce a harmony in the whole; and unless this effect is produced, the labor is in vain, the effect is bad, and is felt even by those who are unable to point out where the deficiency exists.

Another principle and a very important one, is that, in introducing ornaments, the

greatest care should be observed not to display them to such degree as that they should cease to be subservient to the scene; for then they lose this characteristic, and by attracting an undue attention, become themselves the principal.

The proprietor has a more difficult task in the disposition of his ornaments than the disinterested spectator can readily appreciate. The latter judges only of the general effect in viewing the whole, not knowing what interest the proprietor may take in each separate article of ornament; they may have been purchased from time to time by the proprietor with strong impressions of their fitness, and with a special attachment to each one. He displays them with a kind of parental pride, they are his pets, and no

matter what incongruity there may exist among them, he sees them only with the eye of a parent, and with him they are all beautiful, all in place. The stranger knows nothing of this, and if his taste be instructed he views the whole with the cold eye of criticism. It is best then for the proprietor to construct or procure his objects of adornment only as he may require them, and as he may study out the picture slowly and with judgment with the enquiry, first, is the ornament needed? and secondly, is it fit or appropriate? will it enhance or belittle the scene? He will in this way be less likely to fall into vulgar blunders, and will not only save his money but what is often of more consequence than money—disappointment and mortified pride.

THE DELAWARE AND ADIRONDAC GRAPES.

BY F. C. BREHM, WATERLOO, N. Y.

It is with surprise that I see the premium for the best Native Grape, "quality to Rule," has been given to the Adirondac, when the best of our native grapes, the "Delaware," was competing for that prize; and how a committee of impartial judges, who profess to understand fruit, could make such an award, and do it impartially, is to me, and undoubtedly to a great many of the readers of the *HORTICULTURIST*, a mystery, especially to those who have both kinds. I hope the judges who made the award will publish in the *HORTICULTURIST*, or some Horticultural journal, the points on which they made the award; whether it was size, color, or whatever it might be; it certainly could not be quality or flavor; for while the Delaware possesses all the good qualities that can be concentrated in a grape, as a rich, pure, sugary, vinous flavor, full of briskness and life, we see the Adirondac, although a larger grape in point of size of berry, than the Delaware, yet lacks that pure rich, refreshing flavor which the Delaware possesses, and can no more be compared to the Delaware than a Crab Apple to a Baldwin. Now let us take a look at the two Grapes, in point of hardiness, growth, healthiness and productiveness.

Let us examine the Delaware first, as to growth. No grape that I am acquainted with, or have heard of, has been so many times propagated over and over again from non-bearing wood, or wood taken from single eyes, and propagated over again and again, thereby destroying the constitution of such vines. Such are the difficulties the Delaware has had to contend with during its dissemination. Vines that were propagated under such circumstances will make a slow growth at first, and will, if well attended to, ultimately recover and make a good growth. But take the Delaware propagated from bearing wood, or good layers, and it will, with any decent management, make as good a growth of wood as any reasonable man can desire. Excessive growth is a detriment instead of a benefit. It ripens its wood perfectly, and is frost-proof against our cold winters. In point of healthiness, it is free from disease when others lose their foliage and drop their fruit. Its healthiness was more apparent this season. When mildew and rot reigned supreme, the Delaware ripened its fruit without the loss of a berry by rot or a leaf by mildew, and ripened September 15th. In productiveness, I do not think it can be

beaten. As an illustration of the productiveness of my Delawares, I would state: that a vine three years old produced on a cane five feet in length, and grown last year and fruited this year, 43 clusters of fine grapes which quickly sold for 30 cents per pound on the spot.

Now let us look at the Adirondac, grown on the same trellis, with the same care as the Delawares received. In point of growth it is a rampant grower, growing too strong to be easily managed. In point of hardiness I do not think it is quite as hardy as the Delaware. I judge so from the firmness of the wood, not having exposed it during the winter, being afraid it would winter kill. In point of healthiness it lost

nearly all its foliage by mildew to such an extent that the fruit, although colored, remained hard, pulpy, and flavorless, and was not ripe on 1st October, when all my other grapes had been gathered.

These are facts, and I should not have made them public, but for the persistent efforts to gull the people by interested parties. The Adirondac may be a good grape where it can be grown without losing all its foliage; but with me it mildewed more than any other variety, although cultivating some 25 kinds; and to represent that it is earlier, better in quality, and healthier than the noble Delaware, is a simple falsehood.

Waterloo, Nov. 1863.

STONE FENCES.

BY S. T. D.

LIVING in a part of the country well supplied with stone, much of which is suitable, with proper labor and care in selection and construction, for fencing purposes, I am led to inquire why is it that so many persons prefer wooden palings and fancy lattice-work to the permanent walls which might be built at equal or less expense, out of the abundant material which is at hand, and often in the way?

One of our neighbors, a worthy and wealthy gentleman from the city, is the possessor and occupant, during the summer, of one of the most desirable and valuable country seats in the vicinity. It is a large farm, with a broad and beautiful lawn, containing fine old trees and abundance of shrubbery in front of the house. The house is itself elegant and complete in all its appointments, while the barns, stables, and other out-buildings are properly placed and screened from observation by ample plantations. It is really what would be called a "first-class country seat."

This lawn was originally separated from the public road by a wooden paling, five hundred yards, perhaps, in length, with two gates opening upon the broad gravel avenue which sweeps up, with graceful curves, to the entrance porch.

This fence having become dilapidated,

the proprietor found it necessary, during the last season, to replace it with a new structure. Instead of using the stone, which could have been procured in the immediate neighborhood, and probably on the estate, in building a low, solid and permanent wall, he constructed an expensive wooden fence, of a somewhat elaborate pattern. The posts are cased with panel work and surmounted with caps, while the spaces between are filled with a somewhat intricate tracery, and the whole painted of a very satisfactory neutral color, relieved on the splays and projections with a darker tone.

Now, I do not wish to find fault with the design of this fence—perhaps, however, it is a carpenter's rather than an artistic piece of work—but I would be pleased if you would allow me to protest against the taste which would build such a fence when one so very decidedly better and more beautiful to a cultivated eye, could have been put in its place. The consideration of cost was of no consequence in this case, or if it were, the fancy wooden fence was more expensive than the plain, solid stone-wall. It was a mere exercise of taste, as it is called. The stone wall is common along all our roads, and around all our farms. Indeed it is almost the only kind of fence in our neigh-

borhood, except the enclosures of a few of our smaller places and "door yards." My good friend had a taste of his own, and he could afford to indulge it. It runs to posts and rails and painted tracery—a taste that needs correction. It is impertinent and offensive. What is real and appropriate is always in good taste. Wooden fences, in a country that furnishes no stone for such uses, must be endured until live hedges can be substituted. But they should be endured no longer. Even carpenters' work and paint cannot redeem from the condemnation which good taste pronounces; on the contrary, the more elaborate they are made by such appliances, the worse they are. There is nothing of the kind more annoying to an eye that can see the real fitness of things, and the proper adaptations of materials and forms, than as we pass along our highways, through the beautiful country, among the grand old trees, all of which speak to you audibly of permanence and growth,—to find the fences

which separate you from the spreading lawns and the green fields, miserable, thin, rickety wooden constructions. And the more pretentious they are in workmanship and ornament, the more objectionable.

A low, solid, substantial stone wall, where the material is abundant, is in excellent taste. The natural color of the stone makes it unobtrusive, and its tone harmonizes with the various surroundings. This can be covered, if one wishes it, with trailing vines, whose summer greenness and gorgeous autumn tints shall add beauty, by taking away from the bareness of the material and the hardness of horizontal lines.

The live fence is, without doubt, the most beautiful, and we are pleased to see a growing taste in this direction. But for the external fence, where the enclosure is of considerable extent, and the material at hand, we should almost always prefer the substantial stone wall, treated as we have just intimated.

THE FLOWER GARDEN—ITS PLEASURE AND RATIONAL AMUSEMENT.

BY C. N. BEMENT.

A TASTE for the pleasures and comforts of horticulture in a country has been justly considered as an indication of refinement in the people, and its excellent moral effect has been acknowledged in every instance where it has taken place. If effects so desirable can be produced by a taste for the pleasures of horticulture, who can deny its importance or withhold from it his approbation and patronage?

We know of no association more constantly present to the mind, or one more fitting, than that which connects woman with flowers; and rarely indeed does the first appear more charming or engaged in an occupation more suited to her taste, than when she is surrounded by the latter, by blossoms that have been trained and cherished by her own fair hand.

The flower-garden from the remotest antiquity, has ever been considered a sacred place, where all the most chaste and refined feelings of the soul were stirred up, and

called forth into maturity and vigorous action. Here Nature displays her wonderful mystery—her rich and gorgeous tints—her brightest colors—her most balmy perfume. It was a place well calculated to attract the admiration of all the illustrious men and women, both of Greece and Rome. They dedicated such places to their deities, and celebrated various pious and festive rites and solemnities, which, no doubt, in their day, and generation, did afford them the highest enjoyments. It was within these classic scenes that their elegant taste was displayed, their immortal poetry composed, and their literature cultivated to its perfection; and Nature in all her splendor, was often almost rivaled by the genius and ingenuity of her votaries. This pursuit has not only great antiquity, but the approbation of sages, poets, and saints, in its recommendation. Flora is its goddess. Hydras, who presides over health is her attendant, whilst Venus and Cupid are ever ready

to lend their aid and assistance. Therefore ye lovely belles, if you desire health, bright eyes, and rosy features, enter the garden of flowers, and exercise in a wholesome and innocent pleasure which will enliven your mind, enlarge your understanding, warm your heart, and mould your forms, so that you will be prepared to enjoy whatever destiny the God of Nature may determine.

In a climate like ours, where the morning and evening of spring, summer, and autumn are so well calculated to invite us to walk forth and survey the beauties of the field, or luxuriate the eye on the exquisite varieties of plants to which it is congenial, we cannot imagine any fancy more rational than to devote a small spot of ground or a few hours in the twenty-four, to the culture of flowers.

When we meet with a lady who has no taste, no feeling or admiration for such an elegant and refined pursuit, our mind involuntarily reverts to the character of Mistress Dame Van Winkle, of tigris memory. There are so many exquisite beings of such curious and complicated structure, so perfect in all their parts, that they proclaim in silence the incomprehensible wisdom of that Being whose sovereign will could alone create them. They spread out their charms, their tender flowers, that the sun may mature, and the dew increase their sweetness. They feel the air as it passes—to them it is Nature's priest. The glare of the sun witnesseth both their loves and their nuptials. Who hath a heart to love? here, child of Adam, mayest thou indulge the master passion: every flower is either male or female. Well may poets of all ages contemplate this

subject, and sing in admiration the "loves of flowers."

How the universal heart of man blesses flowers! They are wreathed around the cradle, the marriage altar, and the tomb. The Persian in the far East, delights in their perfume, and writes his love in nose-gays, while the Indian child in the far West, claps his hands with glee, as he gathers the abundant blossoms, the illuminated Scriptures of the prairies. The Cupid of the ancient Hindoo tipped his arrows with flowers; and orange flowers are a bridal crown with us, a nation of yesterday.

Flowers should deck the brow of the youthful bride, for they are, in themselves, a lovely type of marriage. They should twine around the tomb, for their perpetual renowned beauty is a symbol of the resurrection. They should rest on the altar, for their fragrance and their beauty ascend in their perpetual worship before the Most High.

Bright and beautiful flowers are welcome ever: welcome in days of prosperity or adversity; more welcome in adversity, for they are true, and true when all else is false. Welcome in sunshine, or in storm; most welcome in the hour when storms without shut from our gaze all that is bright and fair.

But there are times and seasons when there seems a beautiful and harmonious desire for the gift of flowers, when Nature as well as our own desires, and all attending circumstances, seem to turn the heart and mind to those offerings to the Deity.

PO'KEEPSIE, July, 1864.

MONUMENTS.—NO. IV.

BY A PARISH MINISTER.

WE present, this month, to the readers of the *HORTICULTURIST*, an engraving for a monument of larger size and cost than those previously given. It is designed to be placed in the centre, or at the entrance of a cemetery lot, as the sole monument of the family to whom the lot is appropriated. The scroll

across the shield upon the shaft—which is intended to be in bold relief,—should bear the family name. The remaining sides of the shaft, and the principal base, will afford sufficient space for the inscription of individual names and dates.

There is no necessity for crowding our

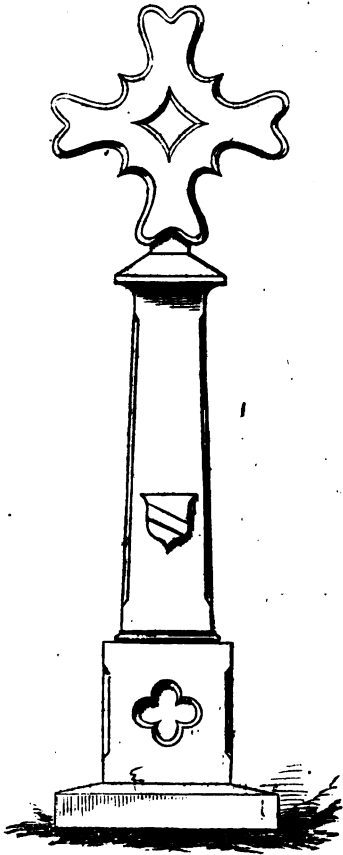
cemeteries with useless monumental structures, and covering over our family burial plots with marble, however appropriate the forms and symbolism may be. A simpler and purer taste would be satisfied with a single memorial which should fitly mark the spot where, side by side, parents and children shall await the summons to the resurrection. One appropriate and handsome monument—it may be as costly as a culti-

vated Christian taste and the means of the family may allow—would be better than several of inferior size and meaner material and execution. It is fit that persons of public worth and prominence should have their separate monuments which might tell all that may properly be told, of their individual history, and commemorate, as far as seemly, their virtues. But generally this multiplication of monuments and headstones is needless at least, and often absurd.

Not long ago it happened that we were officiating in a rural parish not far from this city. The Church was most appropriately built in the midst of *God's Acre*. The old church, now replaced by a more beautiful and convenient structure, was erected before the Revolution, and there, among venerable trees and rude head-stones, the fathers and children of several generations are sleeping. On one spot, appropriated to one of the principal families of the parish, we found the graves of five or six little children, who had died in their infancy. At the head of each of these the loving parents had erected head-stones. They were all of white marble—all of diminutive size, like the infant forms they commemorated—all of the same design and pattern—a low, square stone, upon which reposed a lamb.

Of course, this sameness was not pleasing; it would have been much better if the five or six head-stones could have been incorporated in one impressive memorial. As a question of taste there is no room for doubt.

The design we offer herewith, should be executed in pure white marble. It may be from seven and a half to ten feet in height, and if the execution of the work is entrusted to skillful and competent hands, we think it must be satisfactory.



ORCHARD CULTURE.

READ before the American Pomological Society, at its meeting in Boston, by John A. Warder, of Cincinnati, Ohio :

"After the trees have been well planted in their new home, it becomes an important question to decide what shall be the most

appropriate culture to bestow upon them. The practice of some would-be-orchardists, is that of no culture, which, with the usual neglect that accompanies such treatment, is certain to end in disappointment, from the loss of trees; for no matter how good the

selection may have been in the nursery, nor how thorough the preparation of the soil, nor how careful the planting, the young orchard will never develop its highest degree of perfection if left at this stage of its progress to take care of itself; if neglected now, it will go back, and prove a failure, as any one may have seen who has observed the thousands that are thus sacrificed annually in various parts of the country.

It being conceded that thorough culture is necessary for the proper development of the young trees, it may next be asked whether any other crop should be planted in the orchard.—The answer to this question will depend upon the condition of the soil as to fertility; if poor, it will not do to rob the trees, which constitutes the main crop, but it is seldom the case that such poor land is selected for an orchard; generally our soils are sufficiently fertile to admit of cropping, at least partially, between the trees, without injury to them. Most writers advise the planting of a hoed crop, and prohibit altogether the sowing of grains among the trees. This is not without reason, for the long period between seed time and harvest that the soil about the roots has to lie without the disturbance of the cultivator for the admission of air and moisture, causes it to become compact and dry, and the trees must suffer.

The partial culture with the spade immediately around the trees, which has been proposed as a substitute for thorough culture, is very seldom well done, nor to a sufficient extent, and is generally neglected entirely, so that the poor trees are not only robbed by the surrounding grain crop, but, worse than this, they are imprisoned in the hard soil, which is left after harvest in a condition unsuitable for plowing, and the droughts of summer continue to injure the trees. Such crops as require and admit of the occasional use of the plow and cultivator among them, enable the farmer to keep the soil loose and mellow among his trees; this is the reason such should be selected for planting in a young orchard; these are called hoed crops; some persons prefer those that are of a low growth, such as potatoes

and beans, others think that Indian corn is the very best crop, and suggest that the shade cast by it upon the ground about the trees, and the moisture attracted by the leaves, which often falls to the soil, more than compensates for the injury caused by the corn roots absorbing the moisture below.

Whether we plant any other crop or not, let it be distinctly understood, and constantly borne in mind, that the young trees must be cultivated; the soil must be constantly stirred, and kept clean, until the orchard has fairly got under way with a thrifty growth. This is best effected by continuing the culture some years, and, as men are often unwilling to work without an immediate return for their labor, the naked fallow among the trees will too often be neglected, but the partial crop between them is an incentive to giving the orchard just such attention in the way of cultivation, as it requires.

The length of time that this culture should be continued, will depend upon the condition of the trees, and the character of the soil and surface. The orchard should have assumed the most thrifty growth, before the cultivation is suspended, whether this may have required three years of culture or six; but on hilly lands, with a soil disposed to wash into gullies, we can not continue the plowing with impunity, but must use such alternation of crops as will obviate the necessity for constant open culture. This may be arranged by a rotation of clover with corn or potatoes; a valuable alternation it is, since this legume is itself almost a cultivator of the soil, rendering it loose and mellow, while at the same time the surface is clothed, and the soil is bound together by its roots; moreover this plant attracts much of its sustenance from the atmosphere through its abundant foliage, and the radicals sink deep into the subsoil in search of nutriment.

The clover may be sown at midsummer, after the last plowing of the corn, with or without rye, which last is only used for the sake of clothing the surface, and preventing the washing of the soil, and should be pastured by hogs the following season; let it by no means be harvested. After one year

the clover should be again plowed in; and the cultivation of the young orchard should be continued until the trees be well established; when the land may be again laid down to clover or clover and orchard grass, and be allowed to continue in this condition for an indefinite period, or until the plowing appears to be again required.

The above remarks, as to the treatment of the young orchard, apply to soils of average fertility. There are portions of the country where the growth of orchard trees is too rampant to permit an early productiveness of the trees; this early bearing is a great desideratum in a new country, and with an impatient orchardist; as a mere matter of financial calculation, it is also a question of some moment. As a general rule, the more thorough the culture of the young trees, the more rapidly they are developed to their full extent, the more satisfactory will be the ultimate result in large crops of fine fruit; while all plans that force the trees into a premature fruitage, must have a tendency to produce early decrepitude.

But the encouragement of wood growth must not be continued too long; since it is the antagonist of fruitage; it must be subdued and brought within certain limits to insure abundant crops, though it should never be altogether suspended, the growth

of the tree should continue with the production of fruit. In some soils it has been necessary to curb the excessive production of wood, by discontinuing the cultivation of the soil, and laying down with blue grass, which makes a close sod, and thus checks the growth of the trees, forcing them into a fruiting condition. Every orchardist must decide for himself, whether the orchard of large trees, capable of bearing larger crops at a later period of their existence, is to be preferred to that containing smaller trees bearing a crop within a few years from planting, and continuing to be productive for a considerable period, even though the trees should never attain the large size that is so much admired, nor continue to be productive so long as the other.

In our age and country, the *now*—the immediate return of profit from the investment is the great desideratum with most of us, and many people will prefer to treat their orchards in such a manner as to insure early productiveness, trusting to the future for the supply of fruit for future years. On this account, we find that the early producing varieties are always inquired after and often preferred by orchardists, though the fruit be of inferior quality to that produced by trees of the varieties that are longer coming into bearing.

BIRDS AND INSECTS.

BY C. N. B.

THERE are various insects that always threaten the destruction of fruit and fruit-trees; and they seem to be increasing. They already render very uncertain many kinds of fruit. How shall they be kept at bay? We will answer. Their natural enemy is birds. Insects are food of birds. They are on every tree, shrub, plant, in every pool, swamp and soil. Everywhere they come into being in teeming millions. Many of them attack the fruit for food, or for nests, or their larvae. The means to prevent their doing evil is the birds. We should, therefore, encourage them to grow and multiply

in all our fields and orchards. We should not alarm or destroy them. We should consider them the naturally commissioned sentinels of our fruit trees. We should regard them as natural ornaments and conservators of our orchards and gardens. We should feel that birds are a standing army—on picket duty—self-marshaled and trained to meet and overpower the invading armies of the insect world. The wanton or intentional destruction of a bird should be considered a public loss—a misdemeanor—and should be held an outrage upon Divine order and human interest. God provides a

balance between insects and the feathered tribe; but man, in his cruelty and impiety, destroys the balance; and the insects creep upon his fruit to pay him for it. It is only after civilization has destroyed the birds of a country, that insects overrun it. The birds live upon insects. All agriculturists, gardeners, fruit-growers, philanthropists, all good people should discountenance the destruction of birds and encourage their multiplication by the very kindest treatment. It should become the settled conviction of every community, that birds, by holding in check the insect scourges, are public benefactors. So greatly has the stock of birds been reduced, that cultivators are beginning to be alarmed, and in some of the States have already secured legislative protection, ours among the number.

There is reason to believe, that, although most birds live on a variety of food, yet each particular species of birds has a greater partiality or fondness for some particular kind of insects or reptiles.

Many species of birds follow civilization. The same may be said of several species of insects; or at least, they multiply under its influence. Hence, the necessity that the birds follow, in order to reduce the number of insects. No man can study "Nature's works and ways" without becoming a wiser and a better man. Let us then study and observe.

Incredible, is it not, that the birds should need an advocate, that these bright and beautiful denizens of our garden, our lawns, and groves should fear harm at the hand of man—that his eye and ear should be so dull as to find no charms in their untought melodies, in their forms of perfect grace? Yet not more strange than sadly true is it, that boys, and "children of a larger growth" can delight in the destruction of these harmless creatures. One could not believe it,

did not every day witness these noble bipeds sallying forth, armed with deadly weapons, and on "murderous thoughts intent." And at night, returning with a dozen robins, a few sparrows, and a blue-jay or king-fisher—proud trophies of a well-spent day! "Well, and why not? it is such sport," says a lad, near by. I will tell you, my boy:—these little birds were not made in vain, nor merely to furnish "sport" for the idle. Their Creator formed them for an important use; if you destroy them, you frustrate His plan, and nature always suffers when the laws and plans of God are destroyed. You have probably heard your elders speak of the great increase of the various tribes of voracious insects, and that the fruits are not so fine and fair as of old; but knotty and worm-eaten. Yet we suppose that you nor they either ever dreamed that the destruction of the birds had anything to do with the case. You would realize it, could we tell you how many bugs and worms, and flies were frequently found in the crop of a single bird. We cannot tell you the number, but have been astonished at the amount as certified by creditable witnesses. Farmers and gardeners are beginning to find out the birds to be their most useful allies. Nothing in the insect tribe comes amiss to their dainty-looking bills, from the aphides upon the rose bush, to hideous caterpillars. And if they sometimes treat themselves to a ripe cherry or a tempting strawberry, who can blame them if after such a dinner, they fancy a little fruit for a desert—and how do you know but their quick eye perceived a worm in the very cherry you grudge them? "The laborer is worthy his hire"—and man can well afford this small compensation for their tireless industry.

PO'KEEPSIE, July 10th, 1864.

GRAPES FOR COLD VINERY.—The Eastern Pennsylvania Fruit Growers, at their meeting recently, took a vote on the best varieties of twenty vines for a cold graper,

with the following result:—Black Hamburg, 8; Bowood Muscat, 4; White Frontignac, 2; Grizzly Frontignac, 2; Black Prince, 2; Lady Downe's Seedling, 1; White Syrian, 1.

GATHERING AND KEEPING FRUIT.

It is becoming a well understood principle that pears are improved by being gathered before fully ripe. Some should approach nearer maturity than others. But early apples should be fully ripe, as a general rule, before gathering. Late fall and early winter apples should not be eatable when picked, and all the late winter varieties should be gathered when too hard to yield to the pressure of the thumb, and always before heavy fall frosts. A dry time should be selected, if possible. There will be a few specimens not yet mature, but you can afford to throw them out to save the best and the main crop. When a good keeping variety begins to drop freely from the tree, as is sometimes the case, secure the balance of the crop that remains on the tree as soon as possible; but they should not be mixed with those on the ground—not one should be saved with those picked. Windfalls will not keep, for in addition to the injury sustained from the fall, they become heated by lying upon the ground exposed to the sun and hot air, and the ripening process already commenced is hastening it to a rapid decay.

No matter how hot the weather is, an apple is always cool while upon the tree, and in that condition should be taken care of, if we would have it keep in its most perfect condition for the full development of all the delicious juices with which it is so abundantly supplied. How to obtain it in that condition will be my purpose now to show. We have seen that it must be carefully gathered before it is too ripe, as it is commonly termed; but I say before it is ripe, for when it is ripe it is fit to eat, and that should certainly not be the case with winter apples when gathered.

We have also seen that heat hastens the ripening process, and that cold retards it. Apples should therefore, be kept cool, barely so as not to freeze. A minimum temperature of thirty-four degrees is probably about right, with as little fluctuation as possible.

It is not for the purpose of assuming to know more than the most of you about the best method of keeping apples, that I give

the subject so large a space in this address, but it is to give it more prominence in our deliberations than it has heretofore had. I regard it as one of the points very much overlooked in all meetings of this kind.

Whether we regard the ripening process as a vital or a chemical action, it is quite sure that it should go on gradual and unchecked until all the good qualities are fully developed, and when the highest point of excellence is attained, then the fruit should be used. It is never so good as when just fully ripe; but is frequently eatable for a long time. Some varieties become dry and mealy, others tough and leathery. Others, by being kept very cool, will frequently remain in a very good condition for a very long time, or by the use of artificial means may be kept for an almost indefinite period.

I hold that the ripening process once commenced, goes on, no matter how cold, if frost is not present, slowly, perhaps, but uninterruptedly, until full maturity. Hence the importance of a cool cellar, which should always be dry and dark. It should be frequently aired, when the outside temperature will allow of it. Some varieties are much more sensitive to their treatment than others. The Winesap, for instance, which has a thick skin, may be abused a great deal in handling and but indifferently cared for in the cellar, and yet it will keep pretty well; that is it will rot but little; but, if kept close and warm, it is subject to a fungus that renders it scarcely tolerable to eat. But if it is kept cool and dry, all its best qualities are retained. It is also one of the varieties that does best kept on open shelves. The Belmon, on the other hand, which I regard as one of the best and most profitable apples, is very impatient of bad treatment. Its skin is smooth and thin, and flesh of a delicate texture. If roughly handled and kept in a warm room, it soon decays. If carefully handled and kept in a cool place, it keeps with very little waste till April or May. Indeed, it is, with me, one of the very best of keepers.—*Trans. Ind. Hort. Society.*

THE PROPAGATION OF "BEDDING" GERANIUMS.

THAT "bedding" geraniums are invaluable for flower-garden decoration is proved by the large space which we now see them occupy, and by the great demand there is for novelties, and the endeavors to meet that demand; for we have every season one or more gems added to them. This will be ample apology for a few remarks on their propagation.

Fortunately their propagation and culture is very simple indeed; cuttings may be struck of nearly all the sorts the whole year round, from the 1st January to the 31st December; but they will strike with much less labor at some seasons than at others, and at none more easily than during the next two months, when cuttings can be obtained in abundance. At this season they root freely in the open border, without the aid of glass or hotbed, and with little or no shading. Thus the humblest amateur or cottager can root any quantity, which, when put in pots, boxes, or anything which will hold some soil, he may easily keep over winter in any room where they will not get frozen, and where they can get some light and a little air occasionally. Many of the sorts, especially the variegated ones, are difficult to strike under glass at this season, owing to the succulent nature of the cuttings. Even these kinds will now strike freely out of doors. Though they will do pretty well in any situation, still a south border is preferable, as they do best there, owing to the greater warmth of the soil.

Cuttings may be made of almost any size. Good-sized cuttings (cuttings with three or four joints) should be used when they can be had without injuring or disfiguring the plants, as they make good plants soonest; still, with new things, or any scarce sort, small cuttings (cuttings with two joints) may be used, and, if attended to in potting and shifting, will make good plants before the autumn. If the wood be ripe they may be propagated from single eyes, like Vines; but in this case a good bottom heat is necessary. I once put some eyes into some

pots the latter end of October, and placed them on the hot-water pipes in the Pine-pit; they soon put forth leaves and roots, and were then potted off and kept in heat the whole of the winter; they were shifted in spring, and were large plants by the middle of May.

It is advisable to commence putting in cuttings as soon as they can be had, especially of such sorts as are intended to be potted off singly when rooted, and to be grown to good-sized plants. By being early struck and potted off, the pots get well filled with roots before the autumn, and the plants can with great safety be kept in cold pits or frames, provided the frost is kept out.

For striking the cuttings either of the following methods may be adopted:

1st. Take out the common soil of the border to the depth of about four inches, about three feet wide, and as long as may be required to hold the quantity of cuttings intended to be put in. This space should then be filled with a compost of loam, leaf soil, or peat, and plenty of river or silver sand, which should be made pretty solid by pressing on it. Insert the cuttings in this soil about three inches apart; or a little more or less, according to the size of the cutting, and water gently with a fine rose.

If the weather be dull when the cuttings are put in, they will not require any shading; but if very bright hot weather should prevail, it will be advisable to stick some tree branches in front of them, so as to shade them partially, but not to obstruct the fall of the dew at night.

The only other attention they will require is a little watering when dry, and pinching off any flower-stems that may appear, and picking off decayed leaves. In about a month the whole will be rooted, when they should be taken up, and either potted off singly, or put into pans or boxes for the winter, to be afterwards potted off or planted out into temporary pits, where they can be protected from frost, and where they may remain until the season for planting out.

arrives. In this manner many fine large plants are obtained, which, if carefully transplanted and well watered, make a good show at once.

2d. The following plan I like best, and is the one I adopt myself: The cuttings are put at once into pots and boxes, which are bedded or plunged in a south border. Here they will require the same attention in watering &c., as those put into the borders, until they are rooted, when they may be either potted off singly, or kept as they are until spring. For cuttings put in after the middle of August this is a better plan than putting them into the soil in the borders, and having them to take up and store away in pots or boxes; as, in the case of frost or bad weather, the pots or boxes, after the cuttings are rooted, can be put into a pit, frame, cold vinery, or shed, or under temporary protection, and can be potted off on wet days, or other convenient times. By using plenty of sand in the compost for the cuttings, I have found Golden Chain, and all other kinds of variegated geraniums, root freely when put in pots or boxes, and plunged in a south border. I would not, however, advise cuttings of these kinds to be put in after the 1st September. When not done before that time it is better to lift the old plants before they are injured by the frost, and take cuttings from them in spring.

When it is desirable to get a number of good plants of any particular kind, it is an excellent plan to put the cuttings at once into thumb-pots, and plunge them in a south border. By sticking a few branches in front of them in bright weather, and by attending carefully to the watering, &c., they will soon form roots, and, if shifted immediately into larger pots, they will make good plants before the autumn. Good sized cuttings, put into thumb-pots the beginning of September, will require no shading, and very little watering, and will not flag much unless the weather be more than usually bright at that season, but the heavy dews at night will prevent the cuttings from suffering; and as the leaves nearly all remain healthy, roots are soon protruded from the base of the cuttings. By shifting at

once into large pots fine plants are obtained. I have found cuttings of Scarlet, put in as late as the third week in September, make large plants, treated in this way. I have seen no method of striking "bedding" geraniums at this season better than those above detailed, and they are so inexpensive and simple as to be within the means of the humblest amateur gardener. Plants struck in the open air, and well established, are kept easier during the winter than those struck under glass. If kept tolerably dry, and by giving them plenty of air whenever the weather admits, they may be safely wintered in a pit or frame if they are properly covered in frosty weather. I do not, however, recommend a low temperature for them; quite the contrary. When it can conveniently be had, I prefer—and I recommend—the whole stock of "bedding" geraniums to be kept in a nice healthy dry atmosphere, where the night temperature is rarely below 45 deg.; indeed, for Mrs. Pollock, Sunset, Golden Chain, and many of the other more delicate sorts, I believe this is indispensably necessary, if we wish to have fine healthy plants; and, unless this class of plants are healthy and good, it is better not to attempt to grow them at all. By keeping the variegated ones, particularly the new kinds which it may be desirable to increase, growing through the winter, a stock of good cuttings can be obtained early in spring, which, if put into sandy soil, and giving them a little bottom heat, will soon root, and, by shifting and attention in watering, &c., they will make good plants by the middle of May.

It is rarely that all the old plants of Scarlet are lifted in the autumn, consequently a great number of cuttings can be had before destroyed by the frost. As it is a pity to waste what may be useful, these should be put into pots or boxes, using rather sandy soil; and, if kept dry, they will root either on the shelves or floor of a cold vinery or greenhouse, or on the pipes or shelves in the pine-stove. In either case the great danger to be apprehended is from moisture. I have seen quantities of such cuttings rooted and kept alive by cottagers

in their windows. As there is no other class of "bedding" plants which give so much brilliancy and effect to our garden, and that for so long a time, we must not let a single opportunity we have of getting and putting in cuttings pass by, until we are satisfied we have enough and to spare.—*Florist & Pomologist.*

M. SAUL.

Stourton, Eng. •

EDITOR'S TABLE.

* TO CONTRIBUTORS AND OTHERS.—Address all Communications for the Editorial and publishing departments, to GEO. E. & F. W. WOODWARD, 37 Park Row, N. Y.

HORTICULTURAL ASSOCIATION OF THE AMERICAN INSTITUTE!—How preposterous? It may be very natural to inquire what New York should have to do with Horticulture, except to consume its products and pay our country cousins the highest prices for their fruits, and flowers, and vegetables? Where in all its paved streets, crowded avenues, and seven by nine yards, or its vacant lots worth a dollar per square inch, can the citizen find room, saying nothing of time, to cultivate a tomato or a strawberry? Well might the French Emperor say to his brother of Austria, when the latter compared the two capital cities of their respective countries, intimating that one covered as much ground as the other, "But we don't grow corn in Paris." Neither do we cultivate the cereals in New York, which, as a city, is neither an Agricultural or Horticultural district. But let us inquire if a Horticultural Society may not be tolerated here? needed even? and whether its patrons may not be more numerous than in the rural districts? With constant additions from the country, and the well known taste of our old citizens, one might feel surprised, that of its million inhabitants, none had ever before supposed that we might, could, should and would, have our own Horticultural Society, well sustained, and one that should become a flourishing institution, respected at home and abroad? Have we not beautiful shade and ornamental trees, to say nothing of the Central Park, destined one day in the future, to be the pride and boast, not only of every New Yorker, but of every American? Have we not our

conservatories, green houses, and grape houses? our flower borders, vine arbors, our rears and areas ornamented with green, our parlor-window gardens, our little nooks and corners ornamented with shrubs and plants of almost every kind, and nature?

In one of our rambles into the purlieus of Upper-ten-dom, we discovered a new feature in the construction of houses, with all the modern conveniences. This was a building under glass, in which were planted and cultivated the choicest foreign-grapes, included in the builder's contract. We were also attracted by the numerous climbing roses, Wistarias and other flowers, plants which we deemed necessary appendages to almost every dwelling. We see much to admire in the older parts of our city. On our way to our business we often wander out of the way (no, not out of *our* way,) to enjoy the flowers, at the corner of Fifth Avenue and — Street, or the Magnolia in its season, on the corner of Eight Street, or the flowing Ailanthus, at Tenth Street, (that much abused and despised tree, with its unfragrant odor, but gorgeous flowers when grown in full sunlight,) or in the month of May, to Jefferson Market, to see the splendid Horse-chestnut in flower, surpassing Solomon in all his glory.

A pleasant memory of a dear friend, late President of the Merchants' Bank, is connected with Mr. Palmer's Wistaria in Fourth street, which he kindly allowed every one to visit in its flowering season. And an agreeable recollection of an old merchant is associated with the flowers and shrubs which were to be seen every day of the

year in the grounds and windows of the late Mr. Parish in Fourth Avenue. The city is full of such benefactors, of those who love beauty in all its forms, who appreciate the beautiful in art and nature.

Ask the florists, the gardeners, the seedsmen who support their enterprizes, and the reply is, the denizens of the city; they buy the costly and rare plants brought here from every clime, they purchase every year cut-flowers to the value of half a million of dollars, they pay the highest prices for choice fruits and vegetables, foreign and domestic. If, then, the citizens consume these luxuries—necessaries of refinement rather—may we not believe that material enough can be found in our city to constitute and maintain respectably an independent Horticultural Society. Let us see. If one family in a hundred cultivates plants or flowers, or shrubs or vines, then we have ten thousand families who are fond of Horticulture, which ought to furnish one member from each, and this would constitute a very respectable nucleus for a City Horticultural Society.

Why, then, do we make our Horticultural Association an appendage to the American Institute? What were our Horticultural savans thinking of? The Institute is very respectable in its way, but the two societies are very much out of place when joined together. The union is an absurdity, a self-evident axiom which needs only to be pointed out to receive general assent. We hope its managers will act promptly and secede, founding an independent New York Horticultural Society, which shall become an institution of itself, to reflect glory and honor upon the city. We suggest: 1st. That every one with an "appreciation of beauty in buildings, grounds, and ornament, and a love for trees and flowers," enrol himself without delay as a member. 2d. That each member make it his business to procure another member, and let each one contribute his quota of information for the benefit of the whole, losing no opportunity to promote the welfare of the institution. 3d. That a fund be provided to give liberal

premiums for the best fruits, vegetables, and flowers, to be exhibited in September next, the expenses of which will be reimbursed in tickets of admission and from the sale of articles exhibited. 4th. That early efforts be made to provide a permanent fund to enable the society to carry on its operations free from financial call.

Let it then be understood that our Horticultural Society is *un fait accompli*, that it is ready to receive the products of our brethren of the interior for the fall exhibition, and to dispense its dollars and silver plate in prizes to the most worthy.

GROWING UPLAND CRANBERRIES.—The grower of some fine cranberries grown on upland, furnishes the *Maine Farmer* a few ideas in relation to their cultivation:

It is the nature of the cranberry, like all other plants, to grow to perfection somewhere, and as it happens, this somewhere is where the land is so sterile that nothing else can grow except moss. In proof of this, we find both the bog and mountain cranberries growing naturally on the mountain, in the lowest bogs, and in all localities, sometimes floating on the pond, always on poor soil, mixed with moss, protection for it both from summer heat and winter cold.

Cole, in his Fruit Book, says: "Where a gravelly knoll has been reduced for a road, we saw excellent cranberries of spontaneous production, on dry, hard and poor soil. On another spot, we saw fine fruit by the roadside, on a very poor, dry, hard soil." He also adds, "with these cases of good crops under every disadvantage, it would be surprising if cranberries should not grow well on high land; but as for the culture, I would ask for nothing more than to remove the soil to the depth of one or two feet with a plow and scraper, and plant the same with vines and moss from the cranberry bog. This should be done in the fall or spring, and the tops mowed off the following summer, which will cause them to spread and cover the whole surface. By this experiment I have raised, the present season, at the rate of 559 bushels an acre."

WATERING WITH TEPID WATER.—

Every one who has any experience in hot-house arrangement knows that cold water is injurious to plants grown in heat; but M. Jæger (*Gartenflora*) goes further: he advocates the use of tepid water, particularly for winter-flowering plants, Camellias and Azaleas. From experiments which he has made, these flower quickly when water of 77 deg. to 86 deg. is used. In the sunless winter months a Camellia bud may take weeks to open, but if the plant be watered twice with water of the above temperature, or even a little warmer, the flower takes much less time to expand. For plants out of doors, tepid water may also be advantageously employed in certain cases. In proof of which he adduces the following fact: Last summer Aroides, and other plants cultivated for their foliage, and requiring heat, grew miserably out of doors in Germany until August or September; but on visiting the garden of M. Heineman, at Erfurt, M. Jæger was astonished to find such plants in fine condition early in the season. On expressing his surprise he was told that the plants had been watered almost every day for a considerable time with tepid water. It is probable, M. Jæger thinks, that the tepid water, though acting on the roots but for a short time, places them in a favorable condition for absorption, while the contrary effect is produced by cold water.

DISCUSSIONS ON FRUIT GROWING.—

At a late meeting of Fruit Growers in New York, a letter was read by Solon Robinson, inquiring about raising strawberries with present high prices for labor.

Dr. Ward replied that the raising of strawberries on the old plan involved too much labor—he thought the horse and cultivator would eventually have to do the work. Manure and prepare the ground every way as for Indian corn, and set plants in rows the same distance as corn. Plow and cultivate one way, letting the plants run together in the row, dressing them out with the hoe. Cover with litter or straw in the fall, plough out or go through with cultivator the following

spring, pick the crop and plow under, repeating the operation on the same ground, or elsewhere. Of course a field should be set out each year. The great labor of tillage the second year is thus avoided, a boy and horse doing all the labor of cultivation.

Solon Robinson stated that J. G. Bergen was now raising strawberries in this way. Mr. Pardee would plow under old plants and leave runners for another crop.

In regard to picking, Dr. Ward remarked that boys and girls acquire a great skill by practice—his son had picked 100 quarts in a day. E. Williams said cost of picking depended on size of berries. Monmouth County growers paid their pickers \$1 to \$1.25 per 100 baskets.

Dr. Ward gave a recipe for making grafting wax, such as he uses in his own nursery: 1 part of tallow, 2 of wax, and 4 of rosin. The consistence of the wax will be affected by the weather. If too stiff, he would add tallow, if too soft, rosin. He would use the wax warm and apply it with a brush; put on in this way it was more durable, and a better protection to the graft.

Different methods were suggested for keeping the wax warm during the operation of grafting, such as surrounding the vessel of wax with hot water, or a quilt of batting.

Another recipe, presented to the meeting for making grafting wax, was to melt together 2 parts of rosin, 2, black pitch, 1, white turpentine, 1, tallow, 1, beeswax. This is Watson's recipe—it is applied melted, with a brush.

THE TREES ON THE BOULEVARDS OF PARIS.—All the new plantations of trees on the Boulevards of Paris consist of trees from 10 to 15 years old, and from 26 to 33 feet high. Each Boulevard is planted with one kind of tree only. Thus the Rue Royale is planted with *Acer Negundo*; the Boulevards de la Madeleine and des Capucines with Plane trees; the Boulevard des Italiens with *Ailanthus Glandulosa*; others with Elms, Horse Chestnuts, and Catalpas. The Plane trees are those which are found to succeed the best in the climate of Paris.—*La Belgique Horticole*.

DORYANTHES EXCELSA.—This gigantic Amaryllid seldom flowers, and when it does it sends up a flower-stem of 18 to 26 feet in height, bearing fifty carmine-colored flowers. A plant thirty years old flowered last year in the Botanic Garden at St. Petersburg. The flower-stem began to show itself in June, 1862; the first flower opened early in April, 1863, and in the course of three weeks came out in succession. The flower-stem was about 17 feet high, while the plant which flowered with Loddiges in 1833 produced one 26 feet high. The plant succeeds in a light loam, with a winter temperature of from 45 deg. to 50 deg. It dies after flowering, but before doing so generally sends up suckers, by which it can be propagated.—*Journal de la Société Impériale et Centrale d'Horticulture.*

THE RASPBERRY.—No fruit except the currant and perhaps the gooseberry, can be so cheaply raised as the raspberry, and yet no fruit adapted to our climate is so much neglected. The raspberry, like most of our small fruits, has been much improved within a few years. Dr. Brinckle, of Philadelphia, has done more, perhaps, than any other man, to improve this fruit, having given us some of the best varieties now in cultivation, if not the very best, and what has been said of the strawberry may also be said of this, that it is difficult to tell how far this improvement may be carried.

Raspberries will grow on almost any good soil, but flourish best on a moist soil containing considerable vegetable mold. For garden culture, after spading in a good coat of well rotted manure and ashes, mark off your rows four feet apart, and if you have plenty of room, five is better, setting the plants two or three feet apart in the rows; in either case they will, if well mulched, (which I consider almost indispensable) soon fill all the intermediate space. A plantation of raspberries will need but little care for five or six years, except thinning out, so that the plants shall stand about a foot apart—tying up and heading in about one-third the length of the canes in the spring; laying down and covering the stocks in the

fall with evergreens, leaves, or anything that will shield them from the effects of the sun, when they are not covered with snow. If kept well mulched they will produce much better fruit and require but little weeding, and that can and ought to be done with the hands, on account of the roots running near the surface of the ground.—*Report Maine Board of Agriculture.*

NEW TREES AND SHRUBS.—M. Ville-vielle, of Manorque (Basses Alpes), has obtained a red-flowered variety of the *Robinia Pseud-Acacia*, or Locust tree, which is said to be very ornamental, and as fragrant as the common white type, which is known to every one. A hardy *Ceanothus*, raised between *C. Americanus* and *Azureus*, is about to be sent out by M. Dauvesse, of Orleans. It is very free flowering, bearing, from June to October or November, long panicles of pale blue flowers, changing to deeper blue. The long duration of the bloom will, doubtless, render it a favorite for planting in shrubberies. M. Dauvesse has also a white-flowered *Spiraea Fortunei*, which is said to contrast well with the normal rose-colored form; a variety of the Osage Orange, or *Maclura Aurantiaca*, with white variegated leaves; and a Maple with elegantly cut foliage.—*Florist & Pomologist.*

HAUNTED HEARTS.—A novel, by the author of the *Lamplighter*. Published by J. E. Tilton & Co., Boston. Price \$2.00. The locality in which occurred the principal events of this story is in the northeastern corner of New Jersey, a couple of hours drive from the great city of New York. The main incidents are founded on fact, and with the minor parts are woven together in a very attractive manner. Those who have read the *Lamplighter* will welcome with pleasure another work by the same author.

SKELETON LEAVES AND PHANTOM FLOWERS.—Published by J. E. Tilton & Co., Boston. Price \$2.00. A book of 100 pages, in the very superior and attractive style that characterizes the publications of Messrs. J. E. Tilton & Co. Fine heavy

paper, carefully executed engravings, and typographical execution of great beauty. This treatise gives full and careful instruction in the art of skeletonizing leaves, commencing with the proper selection of varieties, and following up with the various processes of preparation to the phantom boquet. There is an endless source of amusement and instruction provided here, which must be fascinating to all who pursue it. This book, and its companion Wax-flowers, issued in the same style by the same publishers, give a fund of information which if followed will largely increase botanical knowledge. We commend them to our readers.

PARR'S HORTICULTURAL TOOL CHESTS. We recently purchased of Geo. Parr, of Buffalo, New York, one of his Horticultural Tool Chests, which is a very complete affair, and embraces nearly every one of the smaller sized tools made use of in the garden, orchard or vineyard, including the different pruning and grafting implements. They are compactly fitted in a neat chest, which also contains numerous apartments for seeds, etc. Mr. Parr also manufactures every description of carpenter's tools, which he supplies singly, or in chests ranging from a pocket-size to those required by the most extensive builders. His catalogue is worth sending for by any one who wishes to buy good tools.

TRANSACTIONS OF THE ILLINOIS STATE

HORTICULTURAL SOCIETY FOR 1863.—

There is one important fact that is urged on us year after year as we look over our subscription lists and note the steady increase from the State of Illinois, and that is the prominence which is given to Horticulture throughout the length and breadth of the Garden State. Everybody has heard of the Massachusetts State Horticultural Society, that is one of the fixed institutions of our country. Something is occasionally said of the Pennsylvania State Horticultural Society; but who ever heard of the State Horticultural Society of the Empire State, or that of Strawberry-growing, Peach-raising New Jersey. If we mistake not the indications before us, Massachusetts will some day have to look well to her laurels. These Western States do not grow nor move slowly. Illinois has not yet distinguished herself in doing anything in a small way, and her State Horticultural Society does not appear to be organized on any other foundation than a broad, liberal, and comprehensive one; it has all the elements of talent, financial ability, energy, and success. The prominent and influential men of the State are among its members, and it possesses a vitality that has already marked out a prominent position. The transactions for 1863 can be had bound and post-paid by mail for 90 cents. Address W. C. FLAGG, Cor. Secretary, Alton, Illinois.

CORRESPONDENCE.

PETER B. MEAD, Esq.:

Dear Sir: It is a well known fact that all the varieties of our native grapes, except a few of recent origin, possess a hard and disagreeably sour pulp in the center and surrounding the seeds, and it is as generally conceded that if we can arrive at the same consistency of flesh, with the luscious sweetness and rich aroma of the best foreign sorts, as *Hamburgh* and *Muscat*, we should most certainly improve our own Natives: During many years I have advocated this point, and a dozen years ago was

bold enough to assert that we should ultimately obtain this perfection. The results at the present day prove that such an assertion was not made without some physiological knowledge, nor yet from a rambling theory. There is no good to be gained by holding on to any carping about the tastes of those who are used to the flavor of foreign grapes, or that our natives are better as they now exist. We know a well ripened *Isabella* or *Catawba* is a fine and delicious fruit, but if we were to have the same consistency as there is in the flesh of a Ham-

burgh, no lover of good fruits, not even yourself, would dispute the difference as being anything else than an improvement.

This preamble, Mr. Editor, is suggested by the remarks of your correspondent "Pratiquer," and your reply thereto in the June number of the *HORTICULTURIST*, with regard to the Adirondac grape. I have no interest in this grape, neither do I wish to help sustain its reputation unless it is worthy of it, but it does appear as if some persons wish to make it go through a more fiery ordeal than the same individuals are satisfied with under other circumstances. May we hope that this close scrutiny will become more general, and we are arriving at that point when doubt will rule until every new candidate for horticultural favor has established its good and better qualities. With regard to Adirondac, in particular, "Pratiquer" calls for more light, the which I have no doubt the interested parties will be able to supply him with to the fullest extent. Further, he says, "I have examined the leaf of the plant sent out by Mr. Bailey, and must say that, to me, it has the appearance of the *Vitis Vinifera*," which, of course, means the foreign species, and unsuited to our climate. Now I have ten plants of Adirondac sent out by Mr. Bailey, and have examined the leaves, and am not at all inclined to think, but am sure, they are all of the same variety; and that a variety of *Vitis Labrusca*, and therefore a true native, and probably hardy. In fact so near is the approach in appearance in every particular, so far, to Isabella, that I send you a leaf of each, and wish you to please say which is which. As to Adirondac being a foreigner, or a seedling from a grape of *Vitis Vinifera*, that is simply an impossibility, as the structure and organism proves from the plant itself. We have still further proof in the fruit. No well qualified person who saw and tasted that which was exhibited in New York last season could dispute this, unless my observing faculties are very deficient.

Now, Mr. Editor, let us suspend our judgment on Adirondac, accept the facts as they occur, give it a true American welcome, and hope it may be the immediate parent of an

American grape, possessing all the good qualities of an exotic Hamburgh, which it more nearly approaches than any other native; and I know if it should prove to be the case hereafter, you will be as ready to acknowledge "the corn" as any of your old co-laborers.

Yours most respectfully,

WM. CHOBLTON.

I have one Delaware vine now throwing eighteen bunches, and it appears very thrifty; how many shall I let grow? It's of the lot you sent me a year ago last spring—those *little fellows* not larger than grass straws. The vine stands on the bank of Fourth lake, and has not been covered at all for two winters. I have more of the same variety, but not bearing as many grapes. You were correct when you said in reference to the one year old Delawares that you would rather set them out than larger ones grown in the usual way. I am ahead of the two-year-old fellows here.

G. P. D.

Madison, Wis., June, 1864.

[You have managed your vines well to have them give such results the third season. The vines sent were small, but the wood and roots were well ripened, and having received proper care have given you satisfaction. This will be the case with the Delaware if good vines are planted, and are rightly treated afterwards. We have planted large numbers of vines of all ages, from one to six years old, and give our decided preference to one year old plants well grown from single eyes. You must not allow your young vines to overbear this, their first season of fruit. If your vine is very strong, leave eight or nine bunches to mature; if not, reduce the number still more. You should have done this sooner to have had the full benefit. As soon as the berries are well set is the proper time. Your weaker vines should be reduced to two bunches each.—ED.]

DEAR SIRS,—The July number of the HORTICULTURIST, page 228, reports Dr. Trimble's remarks on the destruction of the Aphis by the lady-bug. Will the doctor be kind enough to inform us if the aphis destroys any other insect? Doubtless it is sent to rid us of some other pest. The latter appeared this year, in countless hosts, on many kinds of plants, weeds, shrubs and trees, preceded by the lady-bug in large numbers.

On my cherry and plum trees, where the aphis was abundant, I noticed the absence of curculio, a rare occurrence, and am led to inquire if there may not be something in this visitation to diminish the numbers of the "Little Turk."

For three years successively every fruit and forest tree, shrub and bush have been covered with rose-bugs from the middle to the end of June. This year they have nearly disappeared, except on the roses, where they are as abundant as usual. Has any insect driven them away? Has the aphis or canker-worm anything to do with it? Rose-bugs migrate. Some years ago they appeared in great numbers in Pennsylvania—later in New Jersey, traveling in a north-easterly direction in divergent lines, thus:



They have passed Newburgh, few being found south of it, and large quantities are now (June 20th) about three miles north, covering every green thing apparently; they are stopped in their course by water, rivers or lakes. A gentleman in New Jersey told me last season that he could gather rose-bugs by the half bushel at the foot of the Palisades. It may interest the curious to know if any got across into Westchester County, and in what direction they came. Will some one of your correspondents give us the information?

The canker-worm has taken possession

of our fruit trees this their summer; what is mission except to destroy vegetation?

If the aphis drive away the curculio, we can afford to give them full possession for one year, especially as we know how to get rid of them by means of the lady-bug.

If any of your friends are troubled with mosquitos, let me recommend them to cultivate the dragon-fly—they make quick work. Why should we not keep mosquito hawks as well as hunting dogs?

Flies and such simpletons of the insect tribe who are fond of sweets, and who don't mind the cobalt in it, are easily got rid of, but curculio and many other insects require energy, perseverance, talent and

STRATEGY.

GENTLEMEN:

I owe you many thanks for your currant wine recipe in Vol. 17, page 379, 1862. I have also "tried it" and found it excellent. The suggestions are all worthy of attention. It is not long since, that a distinguished professor, to whom I offered this wine, said, "Ah! this reminds me of the Old London particular Teneriffe. Where do you get such wine?"

I have made it for three years, and you will excuse me if I do not follow your injunction closely (article 8,) for I find it may not only be *looked on*, but *tasted while it is red*. It gives good satisfaction to the palate, and does not deplete the purse as sorely as some of the drugs sold under the name of wine. Let others try it. This recipe has been worth already to me, more than my three years' subscription to the HORTICULTURIST. I can certify to the 7th article, relating to the use of alcohol barrels. They are worthless. A few day's since I found one that had cast its hoops, and "all the wine was spilt about the cellar." Iron hooped casks are the only ones to be relied on.

VINUM RIBES.

THE HORTICULTURIST.

VOL. XIX.....SEPTEMBER, 1864.....NO. CCXIX.

"REGARDLESS OF EXPENSE."

There is, perhaps, no individual trait of character or habit of conduct among our countrymen more noticeable than the lavish use we make of our money for mere purposes of display. We are notoriously shrewd and persistent in the business of accumulating, bold and reckless—*enterprising*, we sometimes call it—in our plans and speculations; somewhat addicted, it may be feared, to gambling expedients and operations in stocks and at the exchanges, and everywhere very eager and earnest in the great vocation of getting rich.

There are, undeniably, great material advantages accruing from all this. It ensures wonderful development of our resources; it brings into action unparalleled activities, and sets in motion the most useful and potent physical and dynamic forces. We are as fertile in inventions as the soil of our old barn-yards is in weeds, and as patient of labor as the toiling ox. No discouragements or failures have power to "hate a jot of heart or hope." We convert our very mischances and falls into new and more successful means of profit and gain, and like the hero of the olden fable, every time we are discomfited and touch the ground, we receive new vigor and increased energy.

There are, possibly, moral advantages, also, flowing from this condition of things. There are certainly significant moral lessons inculcated in the uncertainties and fluctuations of fortune among us, if we have the wisdom to read and interpret them. If we are religiously bound to regard ourselves as "strangers and pilgrims" here, there are many things in our sad and toilsome way-faring, to remind us of the fact, for as in no country is the spirit of trade and speculation more reckless and unrestrained than among our people, so no where else, are the products of this spirit more hazardous and uncertain. The whole history of American commerce and trade demonstrates this with striking examples. And this brings us back to our characteristic weakness,—our superficialness—our propensity for display, "regardless of expense."

An American traveller tells a story* of himself which will serve to illustrate this weakness, in one of its forms. Passing through the streets at the west end of London, his attention was attracted by a display of luscious strawberries in the windows of a plain, but as it happened, a fashionable restaurant. Like many another American traveler, who was not unused to the *res angusti domus* at home and yet had

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found means to wander over Europe, he was now reduced to the necessity of economising somewhat rigidly in the matter of luxuries, if he would have his money suffice for the remaining sight-seeing and the expenses of his homeward voyage. But his favorite fruit looked so deliciously tempting that he could not resist the expenditure of half a crown, or so, as he supposed the indulgence might cost, in a climate where such fruits must be ripened under glass. So making his way within, past several young gentlemen who were feasting their eager eyes upon the same attractive display, he ordered with an American's sovereign regardlessness of expense, a plate of strawberries and cream. It is needless to say that the fruit was fresh, the cream sweet and rich, and the whole repast ambrosial. But fancy his astonishment, when on enquiry, he was told that the price of this little enjoyment was one guinea! Fancy, also, the looks of the young Englishmen, who knew the cost of such luxuries in London, and who were waiting to witness, and enjoy the discomfiture of the American. But our traveler was equal to the emergency.

He saw, at a glance, his position—a guinea irretrievably gone, and curious eyes looking to see his surprise and mortification. He cast a glance of contempt at the bystanders, coolly took a couple of guineas from his purse, in which there remained already too few of the glittering coin, gently laid them upon the table and modestly remarking that strawberries were his favorite fruit, and if the waiter pleased, he would take another plate. His was, we feel like saying, a laudable intention and determination to remain "master of the situation," regardless of expense.

But there is an ambition for costly display much more vulgar and pernicious than this. We see it in our cities especially, but not unfrequently, also, in our country houses. It is a propensity to display and to demand admiration, by means of equipage and dress, costly furniture, and showy personal ornaments, gilding and furbishing the out-

side—the side that is seen, that it may be admired."

Houses are built on this principle. Brown stone or marble and carving on the narrow front, rough brick and coarse plaster in the rear; balconies and battlements and balustrade externally, while within the arrangements and appointments are such as to afford the fewest conveniences for the real comfort of the occupants that can possibly be assembled. Narrow and steep stair-cases, imperfect ventilation, no provision for proper seclusion and privacy—all for show and little or nothing for the requirements of right living.

We must not be understood as objecting to costly materials in building, or to expense in preparing the material, or to the use of suitable ornament or carving, for those who have the means for such expenditure. We certainly prefer French plate glass to any inferior imitation or substitute, and solid, well cut stone to lath and plaster. But let it be real, solid, substantial. Avoid shams everywhere, in your domestic structures and appointments, as well as in your social relations and your religious associations and creeds.

While this is true of the arrangement of our city houses, it is more emphatically true of their furnishing. Cost there may be, and lavish cost, for display, and meretricious ornament abounds everywhere. But there is a lack of simple and elegant taste in the selection and arrangement to furniture and ornaments which are intended to make the family home comfortable and attractive, and to beautify the place around which our tenderest and holiest affections dwell. Consequently no genuine home feelings are ever found there. The inmates might as well pass their lives at one of our monster fashionable hotels, where the gilding and the fresco, the brocade and the velvet, the carpet and curtains would furnish as many gentle and tender associations of home, and the sacred relations of the household, as belong to these dwellings which have been built and fitted up without regard to cost.

In the country there may be something less of this spirit of rivalry and display than in our towns, and consequently something more of genuine homefeeling and association. Indeed, we know places that are *Old Homesteads*, wherever the children may have pitched their tents in their journeyings. And it is a beautiful sight to look upon, the old place where generation after generation of the same family have lived and worked, enjoyed and suffered and died. To this place the children gather on memorial days and for family festivals, and clustering there, under the old roof-tree, with their children about their knees, they recall the cherished memories of earlier years, grow young again in the inspirations of the fresh spring-time, give a sigh and a tear to those who have fallen out of the procession and will no more come home, to keep with them these sacred feast days, and with simple, pious, thankfulness they bless the DEAR LORD for all the good they enjoy.

But all country homes are not consecrated by such associations and memories. The Lares and Penates departed from many of them when their occupants went out to build palaces in the commercial emporiums, or new homes in the West. And in the new villa—as we ambitiously call our country seats, there is no shrine for these old time household gods. We build, and lay out grounds and plant, regardless of expense, and in many cases, equally regardless of a proper taste. That is to say, the same expenditure of money and labor, under the superintendence of an educated architect and a skilled artist in landscape gardening

would have produced far more satisfactory results, as far as the æsthetic effects are concerned, and would have furnished a larger amount of conveniencies and comforts for the occupants.

And this is the great mistake we are apt to make when we build regardless of cost. Unfortunately the man who would not undertake to cut out his own clothes, or make his own shoes, but would employ skilled workmen who could do it better and cheaper, thinks he can plan his house and lay out his grounds, according to his own taste, and secure all the requirements of an elegant and complete country home. But there are two difficulties intervening between his purposes and their execution. One is that his taste in these matters has not been sufficiently cultivated; the other is that he is deficient in mechanical skill and manual dexterity. We remember the case of a French gentleman who built an elegant house in the city, regardless of expense. It was complete in all its appointments and replete with all conveniencies, with one small exception, and that was—strange as it may seem that a Frenchman should ever, for one moment, forget the *cuisine*—he actually neglected to provide a kitchen, or any convenient place where the important operations of the kitchen could be carried on, and was compelled to use a portion of the attic story for these purposes. Greater blunders than this are committed every year, and greater inconveniencies incurred by those who build in town and country regardless of professional skill and experience as well as regardless of expense.

THE POLYPROSOPIC ROOF.

BY GEO. E. & F. W. WOODWARD, ARCHITECTS, ETC., 37 PARK ROW, N. Y.

Polyprosopic is not a dictionary word, at least we cannot find it in our two volume large quarto edition of Webster, but Loudon makes use of it to name a special form of roof sometimes made use of in the construction of Horticultural buildings, the true meaning of which we believe is, that the

interior side or outline of the rafter is curvilinear and the exterior formed of planes or faces.

A very extensive practice in the design and erection of Horticultural buildings of all classes and for all purposes, from the low priced commercial shed to the finished

crystal palaces, that adorn our finest country seats, has led us to a more thorough investigation of this now very important subject, and we have been enabled by a long practical experience in the construction and practical management of Horticultural buildings to reach conclusions relative to form, combination, heating and management that could not be arrived at in any other manner.

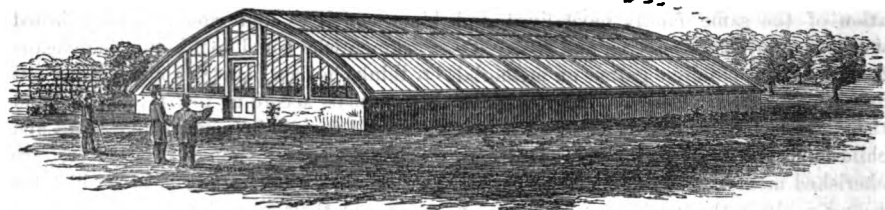


Fig. 1.—Perspective.

We have illustrated examples of the straight and curvilinear roofs, and now show the polyprosopic roof in which manner we have erected some half dozen graperies and plant houses.

This particular form of hot houses was described by Mr. Loudon in his encyclopedia of gardening some 30 years ago, and he says, "he considers it to be the *ne plus ultra* of improvement as far as air and light are concerned.

Mr. Leuchars in his practical treatise on hot-houses published some twelve or fifteen years since, illustrates this form of house and says, "it is by some considered superior to all other forms for winter forcing."

Mr. James Cranston of Birmingham, England, has also adopted this form of construction, which in many respects he considers ahead of all others. It seems to have been very generally known and used by many builders of glass houses and its numerous

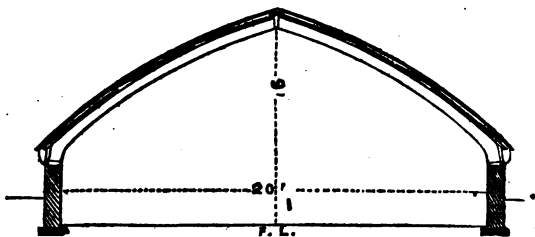


Fig. 2.—Section.

combinations of sliding, lifting, and permanently fastened sash has been public property for upwards of thirty years. Although nearly approaching to the curvilinear form it lacks the graceful beauty of a continuously curved line, and as excessive ventilation so necessary in the climate of England, is not required in our dry sunny atmosphere, the lifting or sliding sash roof is not considered so desirable as the continuous fixed sash roof, which is at once the most beauti-

ful and the most economical roof yet introduced.

The principal advantage of the Polyprosopic roof, is its portability that is it can be made in sashes, and transported to any portion of the country, thus obviating the necessity of painting and glazing in the hot atmosphere of the interior, or loss of time from storms, etc., on outside work. The fixed sash roof house can be sent anywhere primed, but the glazing and second coat of

paint must be done after the erection of the building; either house we think equally well adapted to growing purposes, but as a matter of beauty and economy we give the preference to the fixed curvilinear roof.

The engraving is a view of a Plant House, erected by us for Mr. Geo. H. Brown on his beautiful estate, of Millbrook, near Washington Hollow, Dutchess Co., New York. The plan of the house gives two nearly equal apartments, one to be

used as a propagating and forcing house, and the other as a conservatory or show house for plants and flowers. Both are heated by the circulation of hot water and can be worked independently of each other. Such houses add very much to the attractions of a country estate, and impress a stranger with a higher degree of taste and refinement, while the owner has added very much to his luxuries and enjoyments.

GRAPE GRAFTING.

BY PRATIQUER.

MUCH attention has been given to this interesting branch of Horticulture of late, and it would be exceedingly instructive to your readers if each operator would publish his experience, naming failures as well as successes, for the benefit of all.

The series of experiments by the late Dr. Massie of Chillicothe, crowned with final success just as he was removed by death, in 1863, may be said to have inaugurated a new era in grape culture, which it is to be hoped will be followed up by amateurs and cultivators generally.

It is an interesting study. The grape vine already obeys the command of man, almost like a reasoning plant. It is so pliant and yielding that we can say to it, "thus far shalt thou grow and no farther." It may be pruned, pinched, trimmed, trained to any extent and in any direction;—it may be made to bear its fruit when, and even where we direct; its fruit packed away in latent buds, for the ensuing year, may be made to blossom and bear this year. Its tendency is to become a vine, but man says, "become a tree," and it obeys—trailing on the ground, or into a tree on the side of a building, an arbor, trellis, or stake as directed, with its fruit at the collar or on its extremest end. It may be cut to the ground, or even under the surface and forced to produce a new variety of fruit instead of its own. Its multiplication, by cutting into a thousand pieces, producing "after its kind"

with more ease and certainty than from seed, as many plants as there are buds, is one of its most wonderful properties, but our present inquiry is into its ability to produce new varieties of fruit by the process of grafting.

The recent publications upon this subject make it appear to be very plain and easy; much, however, is still unknown; and the novice has much yet to learn of the habits of the vine, and its affinities. Some varieties assimilate more readily than others, and it is well to understand this fact before bestowing too much labor and expense upon grafting—to say nothing of the loss sustained in cutting down old vines, especially if they are well-tried and valuable sorts. If vines are found to be diseased, it is better to root them out entirely than to perpetuate the evil by engrafting good varieties upon them. None but good (the best) stock should be chosen to graft upon. All the manipulation should be done with care; a pleasant day, when the soil is not wet, should be selected: the ground should be removed so as not to injure the roots; sharp and suitable tools should be had, to be carried in a basket with the wax, the ties, &c.; when the vine is uncovered, saw, or cut below the joint so as to present a smooth stem that can be easily split, leaving a clean and smooth place to insert the scion. Let the latter be fresh cut, and shaped and fitted with care; the split being made with

a sharp instrument that will cut, not tear, the root. After insertion, fill all the open space with Trowbridge's grafting wax, to keep the water out of the split, then tie with Cuba bass. Cover the lower bud with moss so as to keep it continually damp, which promotes the callus (drying at any time destroys the bud); cover with sand, in a clay or hard soil, (this is necessary to success); then cover the scion with a common flower pot, and over the whole place litter, straw or earth to prevent freezing—or if it freezes, to protect it from extreme cold. In this way the work may be done in November, while the weather is suitable to work out of doors, and before the ground is frozen up in our Northern climate, though the same rule, will apply to the work when performed in March, and so far as the writer's experience goes, the scions grow equally well—the work may therefore be done at any suitable time from November to March. If due regard is paid to protection, the plant may be grafted as well above ground as below, but it is more troublesome to make a mound above it than to dig to the root. The writer has had best success when using the grafting wax, moss and sand, and indeed in clay soil, has hardly succeeded otherwise. In some cases he is aware that he lost scions by having them cut and exposed to the air, being called off when ready to insert them. Care should be taken to select well-ripened wood for scions, and they should be set only in healthy roots.

Attention should be given in selecting scions and roots to their affinities. Delaware is more congenial to Clinton than to Catawba or Isabella. Allen's Hybrid is not congenial to either of the latter; by careful comparison and study those that are best suited for each other may be selected. The writer has had more success in engrafting a Diana seedling, than with any other: on Isabella all lived and on Catawba two-thirds lived. Nearly all those that budded early, damped off, while those that budded late, lived; some started from the lower bud, and one put out roots on its own account at the junction with the old root. Many of the failures may be at-

tributed to incongeniality, others to bad management, omitting the trifles that some would consider of *no importance*, such as bad weather, haste, want of proper material, tools in bad order, or an omission to tie, or wax, or by using poor covering; want of moisture; use of scions prepared the day before; roots in bad condition; not cut in the right place or split improperly. Each one of these is essential to success, and none should be omitted, if one would not lose his labor. It is stated that grape grafting is so simple that it may be successfully practised by boring a hole in a root and plugging it with a scion; and that the only tools needed are a Barlow knife and a gimlet. Mr. Downing says he did this once and only once—the conditions were all favorable, but something more is requisite to success when followed on a large scale; every beginner can certify to that, and every reader can refer to his own experiments in the past year, in proof of this remark: How many who had Catawba, To Kalon, Diana, Isabella, and even Concord suffering with the rot and mildew, who have in vain sought to incorporate thereon the Delaware, Iona, Creveling and other valuable new varieties? the graft did not take, and it is well it did not; there was incongeniality. If the roots were absolutely dead, so much the better. In such cases let them be dug out and good healthy plants of the new varieties planted instead thereof. The writer having initiated a series of experiments, proposes to give the results for the benefit of his fellow sufferers, in the hope to receive in return the experience of others who have tried and either failed or succeeded. In 1863 a friend presented the writer a new out-door grape, said to be very fine, which he grafted early in March, in the Grape house, on a White Chasselas root; it grew finely and produced one cluster of grapes which ripened Isabellas!

EXPERIMENT 1. In November of the same year, a new variety, not yet published, was grafted on this Chasselas-Isabella root, (double worked), which is now August 8th, twelve feet long, having grown to the top of the house and there stopped, with lat-

erals, making an aggregate of thirty nine feet nine inches, the cane is $1\frac{1}{4}$ inches in circumference, having on it one bunch of grapes, (one bunch having been removed), on which are 28 grapes of good size and promise.

EXP. 2. The same new variety grafted on a White Sweetwater root, has a growth of seven inches.

EXP. 3. The same variety on a Pitmas-ton's White Cluster, has a growth of 10 inch.

EXP. 4. Iona on White Malvasia, growth of $3\frac{1}{4}$ inches.

EXP. 5. Iona on White Malvasia, growth of $1\frac{1}{4}$ inches. The foregoing are all in the grape-house. The following in the open air.

EXP. 6. Allen's Hybrid on Isabella, 10 scions, all dead.

EXP. 7. Allen's Hybrid on Catawba, 3 scions, all dead.

EXP. 8. Creveling on Isabella, 51 scions, 25 alive, 26 dead.

EXP. 9. Creveling on Catawba, 1 dead.

EXP. 10. Delaware on Isabella, 50, 25 alive, 25 dead. One of these grafts has made over 20 feet growth; another about 15; several 3 feet; the others from 3 to 8 inches.

EXP. 11. Same on same; 7 in another place, all dead.

EXP. 12. Delaware on Catawba, 5, all dead.

EXP. 13. Delaware on Garrigues, 2, all dead.

EXP. 14. Diana seedling on Isabella, 3, all living.

EXP. 15. Same on Catawba, 9, 6 living, 3 dead.

EXP. 16. Same on Anna, 1 dead.

EXP. 17. Same on Clinton, 1 dead.

EXP. 18. Same on Perkins, 2, 1 alive, 1 dead.

EXP. 19. Same on Am. Hamburgh, 2 dead.

EXP. 20. Iona on Isabella, 2, dead.

EXP. 21. Iona on To Kalon, 3, 2 alive, 1 dead. One of these living plants is the largest in the open air, except Delaware, being 67 inches high, Aug. 8th, with 134 inches of laterals, a stout cane and abundant side branches, very close jointed; the other graft of the same age, and set under similar circumstances, is only three inches high, but is starting since the late heavy rains.

EXP. 22. Israella on Isabella, 1, dead.

EXP. 23. Delaware on Isabella, these

were young plants dug up and grafted and reset, all died—100 roots.

EXP. 24. Clinton on Isabella, 10 roots, like No. 23, all lived.

EXP. 25. Hartford Prolific on Isabella, 1 dead.

EXP. 26. Delaware on Isabella; root taken up, grafted, and set out in a box under glass, lived and has grown about a foot in length; this had no bottom heat, but had the benefit of a cold house for two months.

Many scions that start early would probably live if protected from the sun and air, until they had attained strength enough to go alone. Oiled paper is said to answer the purpose, but is difficult to keep it in place in the open air. I have used flower pots a little elevated on the edge, but with no very favorable result. The grafts in the open air are generally of short and feeble growth, from $1\frac{1}{4}$ to 8 inches, with few exceptions, and may not ripen their wood so as to survive the winter. The prospect is, therefore, that the grafting of 1864, will be a failure in most cases; but this ought not to be received as a general rule. The drought of the present season, June and July, has exceeded anything known for a long period, and was becoming a national evil, so great was its extent. Grape growers have not been exempt from its influence, but have suffered in common with others, in the loss of plants, that have perished, as well as those which have not grown after being properly planted and carefully cultivated.

Instead of giving up this method of cultivation, the writer intends to go at it with renewed vigor on the approach of the proper season, November, and with more experience and practice, hopes to overcome many, if not all, the obstacles attending the operation; and he calls upon his co-laborers to relate their experience through the HORTICULTURIST, for the benefit of whom it may concern.

P. S.—The Grape crop promises well this season. The dry weather has been very favorable to the growth and development of the fruit; but little rot or mildew is seen as yet. Hartford Prolific began to color on 3d of Aug., just one week earlier than usual, and there is an appearance of general early ripening.

PLANTING CONSIDERED AS A DUTY.

It is one of the many grievous faults of this fast age, that everything is done only for the present; every enterprise looks for immediate realization, and every exertion only to present enjoyment.

Men hasten to get rich, that they may enjoy the fruit of their possession at once. *Carpe Diem* is the prevailing maxim. Life is looked upon as too short, and to enjoy it while we are sure of it is the philosophy of the day. Hence posterity comes in for a small share of consideration, and is left to take care of itself. Those who are in quest of country homes as a general thing seek either to find every thing done to their hand, or so nearly so as to leave only what will serve for pastime to the proprietor. Few are willing to create places, and if you talk about planting and making orchards of fruit, and groves of ornamental or forest trees, the ready answer comes, "Oh I cannot afford to wait so many years to enjoy the fruit of my labor, I am too old." Another reason for this is doubtless to be found in the fact, that places change hands so frequently; a large investment is made and held for a while as a hobby, then comes ennui, the hobby is dead, and the party tired of his estate, sells it, and another takes his place to go through perhaps a like experience. These are evils incident to, and perfectly characteristic of the age we live in.

Under these considerations we would draw attention to the subject of *planting*—planting not for ourselves, and our own immediate enjoyment, but for the sake of those who are to come after us. There is no reason why he who plants dwarf fruit trees to realize quickly, should not at the same time plant standards, which if he cannot enjoy himself, those who come after him will. Our ancestors seem to have been influenced by a better spirit, and had they possessed the advantages in the way of science and facilities for procuring good varieties that we enjoy, there would be many a noble apple orchard, where now we have

fine large trees bearing loads of worthless fruit.

This fact should stimulate us to plant largely from the abundant resources of our nurseries, not only orchards of apples but all hardy and long-lived fruit trees. And we do not mean by this that the operation is to cease with fruit trees, but the good work should be carried out among the ornamental and forest trees. Let not the work cease with planting around the mansion, but if there are favorable sites for others, plant there likewise in prospect of those other mansions which one day may grace the spot and whose proprietors will bless your foresight. Planting is an honorable and ennobling occupation. He who cuts down a tree takes a life—it cannot be restored.

He who plants a tree creates a life and erects at the same time a monument to himself; a monument it may be, in the words of the poet, *acre perennius*; more lasting, more grateful in perpetuating his name and memory than any other work of his life time.

Planting is a duty to posterity, not only to supply the place of what we consume, but in handing down to them the Arboricultural knowledge of our own time. He who plants to-day, writes a volume of history; his subjects or tree facts may be ever so silent now, but they will one day speak and discourse eloquently on the knowledge and taste of the present day.

We would like to see this principle prevail throughout the length and breadth of the land; in the country and in the cities. Who does not regret the loss of trees in our metropolis? Who that lived in New York twenty-five years ago, can fail to look back with regret on the noble old trees which the city even then possessed? the trees which shaded Broadway; the trees which filled our old Park and afforded delightful shade to the *pater-familias* as with his wife and children he wended his way to and from

church of a hot Sunday morning: the stately trees which then lined our Battery and were the joy of the Young America who were wont to go there for an afternoon flirtation and promenade. What alumnus of Columbia does not sigh when he thinks of the old Sycamores which graced the College Green, and under which as a student he was wont to study out the lecture which he had neglected at home, or to loaf out the half hour of chapel, or perhaps a lecture from which he had been expelled for some overt act of juvenile hilarity and mischief? They are all gone and have given place to the spirit of commerce and the march of improvement.

But we would particularly like to impress this duty of planting on our wealthy gentlemen who own country estates—plant—plant with taste and judgment; study the science of Arboriculture; there is no more interesting branch of science. No gentleman's library should be without such works as the encyclopedias of Loudon, and especially his "*Arboretum et Fruticetum Britannicum*." Study the book and carry out the practice. There are many new ornamental trees which are yet very rare in this country—generally speaking, they are look-

ed upon as beyond the means of the farming community—but to these gentlemen of fortune they are bagatelles after all, and yet we do not find them on their estates, simply because they know nothing about them, nor will they take the pains to inform themselves. When seen it is too often merely the act of the gardener who happened to be a man of superior attainment, and upon whose information the proprietor is content to rely. There are of course exceptions to this, striking exceptions of gentlemen who have retired to a country life, and with well cultivated minds and handsome tastes devoted themselves to this study. The effect of this is seen on their estates, where not only their own acquirements and taste are displayed, but also a generous patronage of those whose specialities they needed, whether Architect, Engineer or Landscape Gardener.

Let planting then be looked on as a duty—a duty to ourselves, to our country, to science and to posterity. And while it commands attention as a duty, let its fulfillment be as exact as we are desirous of giving to other duties; each one in proportion as he is gifted with the opportunity and the ability.

THE FOURTH OF JULY APPLE,

BY A. G. HANFORD, COLUMBUS, OHIO.

Tree a vigorous upright grower, forming a handsome pyramidal head; shoots stout, leaves and blossoms large.

Fruit above medium size to large, roundish oblate, sometimes conical, often slightly ribbed, especially the earliest ripening specimens.

Color pale yellow, nearly white in the shade, with distinct stripes and splashes of bright red in the sun, and covered with a delicate white bloom.

Flesh yellowish white, tender juicy, quite acid; good, though not first-rate flavor.

It is a fine kitchen apple, well suited to this purpose when but half grown. Cooking

tender; its brisk acid, when properly tempered with sugar, makes a very agreeable sauce.

It is extremely hardy, an early bearer, and very productive; ripens a little before the early harvest, and for several weeks thereafter.

Valuable for family use and profitable for market. \$20 have been received for a season's crop from one tree.

This beautiful apple was introduced into this place from Cassel, Germany. There it was known as the August apple. When it fruited here, specimens were found nicely colored, and nearly—or quite ripe on the

anniversary of our national birthday. For his adopted country, our German friend who this reason, and being full of enthusiasm for imported it, re-named it the 4th of July apple.

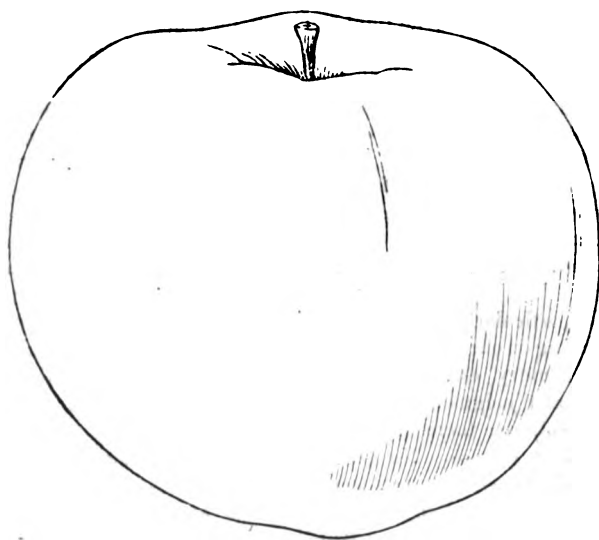


Fig. 1.—Fourth of July Apple.

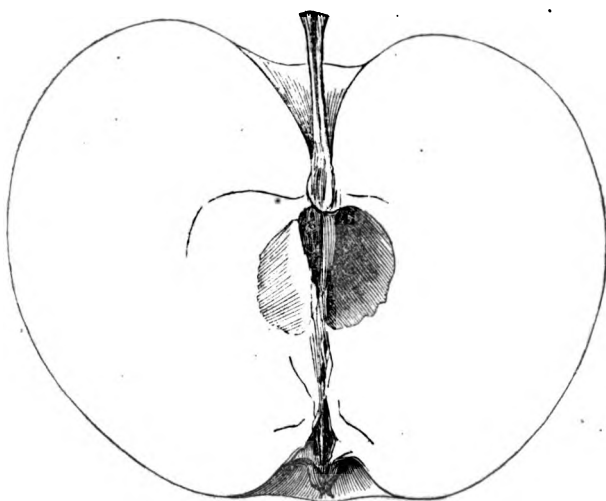


Fig. 2.—Section

PRUNING DWARF PEAR TREES.

Dwarf pear culture has been so often discussed in our pages and those of other Horticultural journals that there seems to remain little more to be said on the subject. Amateurs and others grow pears in their gardens and orchards with more or less success, according to the care given in the proper selection of varieties found to succeed well on the quince stock, adaptability of soil, and proper principles of pruning followed out. The last requisite to success, we deem of much importance.

A dwarf pear tree, if left to itself, will generally show fruit the third or fourth season from the bud, and if allowed to go on without out-thinning the fruit or pruning, the branches, will become ill-shaped, the fruit small and inferior, growth will cease, and tree soon be exhausted. With proper attention the opposite will be the case. But pruning may be over done, and often is. We have the question frequently asked, why do not my dwarf trees bear? The soil has been highly enriched, the best varieties have been selected, they have received the best of care, and pruning has not been neglected, yet I watch in vain for fruit. My trees are, many of them old enough to have borne for several seasons, they are growing thriftily, but scarcely a blossom appears. Our attention was lately called to a garden containing about a hundred trees answering the above description. The growth of wood was very strong, but on looking for the last year's wood we found that it had been cut back to two or three eyes after the manner of spur pruning a grape vine. Some of the trees ought to have borne half a bushel of fruit and would have done so but for the excessive shearing that they had undergone. Pruning to induce fruit, and pruning to induce growth, are distinct operations. In the first we should aim to check rampant growth, which end may be obtained by deferring the pruning until the sap begins to move in the spring; then moderately shortening the shoots, and by summer pinching two or

three times during the season. There are generally many shoots produced in the interior of trees that would cross and interfere with each other if allowed to remain. These may be converted into fruit spurs by pinching, or they may be partly broken down two or three inches from their base in June, and allowed to hang. A callus will form at the wounded place, and buds will generally make their appearance which will become fruitful after the second season. Pears on their own roots may by these means be brought into a fruitful state, nearly as soon as those budded on the quince. To induce growth upon a tree that has been allowed to overbear, and is in an enfeebled condition, we cut back severely—sometimes upon the two and three year old wood, removing the majority of the fruit spurs, which will generally cause vigorous shoots to put forth, produce a corresponding growth of roots, and restore the tree to health and vigor, if done before it is too late.

Dwarf trees are often planted in gardens along the walks; they are small at first, and the future growth in many instances does not enter into the planter's calculations. These trees, dwarf though we may call them, will not always remain the miniature affairs that many would have them. The soil is well enriched and they grow beyond expectation. It is soon found that when they were planted within a foot or two of the pathway it would have been better to have made the distance at least five feet. But the mistake has been made, and pruning must be resorted to, to remedy the difficulty, and the trees are razed to the desired proportions. What is the consequence? another season of wood growth followed by another mutilation, which keeping up such a continual excitement, prevents fruiting. Short pruning concentrates the sap into a few buds and vigorous growth follows. Longer pruning induces the formation of the fruit branches, because slender and feeble shoots are more disposed to fruit. Some of the varieties, as the Duchess d'Angouleme

and others frequently produce fruit buds at and near the terminus of the leading shoots. These should all be removed and only the short stout fruit spurs, which are able to sustain the weight of the fruit, allowed to remain.

Thinning the fruit is also an important operation, and one well understood by those who grow fine specimens for market or ex-

hibition. A moderate quantity only is left. One half and often two thirds are removed while small. What is lost in number is more than compensated for in the size and beauty that the remainder attain. Our experience with dwarf pears has been most satisfactory, and we are sure that with a proper understanding of their requirements, the failures will be few.

OPEN FIRE-PLACES.

FROM HALL'S JOURNAL OF HEALTH, NEW YORK.

It is not possible to supply a pure warmth by any furnace ever invented, unless it simply heats water or air, out of which is given the caloric necessary to make a dwelling comfortable. But warming houses by steam, hot water, or hot air, costs, for an ordinary residence, about eight hundred dollars, which makes it impracticable—places this luxury wholly beyond four-fifths of all the households in the land. That the heat which comes from any furnace through an ordinary register, although the coals are red-hot, is a sickening stench, can be demonstrated any moment in a winter's day; it is sending into a room an incessant stream of air, almost wholly divested of its oxygen, which is the element for which alone air is breathed at all; nor is this all—the oxygen has not only been abstracted, but sulphuretted hydrogen and carbonated hydrogen, which are among the most noisome smells in nature—that of rotten eggs—replace the oxygen; and that such an atmosphere, steaming into our parlors, and dining-rooms, and chambers, cannot be otherwise than most pernicious to health, only but an idiot can deny. Every year new patents are coming out, claiming to meet the failures of their predecessors, proving conclusively that all previous ones have been signal and lamentable failures.

It may be a more potent and convincing argument against the pestiferous effects of furnace heat, at least in the minds of some, that it ruins the furniture and the wood-work of all buildings into which it is introduced.

Open wood-fires, the most cheery and delightful of all modes of house warming, are too expensive, and are exceedingly troublesome. The common open grates for coal are the next best, but they fail to give a comfortable heat in the coldest weather; they fail to keep the feet warm, which is the most important part of the body to be kept agreeably heated; and, in addition, the very instant the coal in the grate is touched, the whole room is filled with a fine dust, which settles on the paintings, the furniture, the carpets, and the very clothing in the drawers, making dingy the most polished surfaces, scratching the furniture and the gilding, and grinding out the carpets by the flinty dust.

But there is a method of warming houses, cheaper than grates and more efficient, giving almost none of their dust; incomparably less troublesome than wood-fires, while the heat is just as genial and quite as pure; the fire needs replenishing but once a day, never requires a poker, if properly attended to; gives very little dust, keeps the feet warm, and keeps before the eyes the cheery sight of a broad bed of burning, glowing coals. In short it is a plan for warming houses, which has never, in all its points, been surpassed—has never been equalled. It is Dixon's low-down grate. It is believed that there is scarcely a single educated physician in Philadelphia, who owns the house he lives in, who is not supplied with one or more of these delightful luxuries. They cost from twenty-five dollars each and upward, and are placed instead of

an ordinary fireplace or grate in the course of a few hours.

Three-fourths of the heat, of a grate or fireplace goes up the chimney, and is wasted. Dixon's Philadelphia low-down grate, by a moderate extra expense, can be so arranged that all the ashes are conveyed into the cellar, and the otherwise wasted heat is saved to a considerable extent, and conveyed into the rooms above; not the heat of burning coals, but air is brought from out-doors, carried behind the chimney-back, heated without coming in contact with the coals, and is conveyed into the room above by an ordinary register, not in a sulphurous odor, but simply in the shape of pure air warmed, which is of inestimable value for sitting-rooms, chambers and nurseries. We had one of these admirable

contrivances put in our house in 1859, and every additional year only increases our appreciation of the luxury. This notice has been written without the knowledge of the manufacturer, and will surprise him as much as any one of our readers; but it would add so much to the health of families, both in town and country, whether they burn soft coal, anthracite, or common wood, for it is adapted to the consumption of any kind of solid fuel, that we feel constrained to bring it thus prominently forward, and the more fearlessly because we know whereof we affirm. To save us the expense, time, and trouble of answering letters of inquiry, our readers will please address T. W. Dixon, 1324 Chestnut street, Philadelphia, or his agents, Geo. E. & F. W. Woodward, 37 Park Row, New York City.

TWIN CRAWFORD'S EARLY PEACH.

We received from the famous orchard houses of Isaac Pullen, Esq., at Hightstown, N. J., on the 24th of June, a Twin Crawford's Early peach; ripe, and in full fla-

vor and perfection, and lettered brilliantly on the sunny side with the names of Lincoln and Johnson. This being a twin peach, as shown in the engravings, is dis-

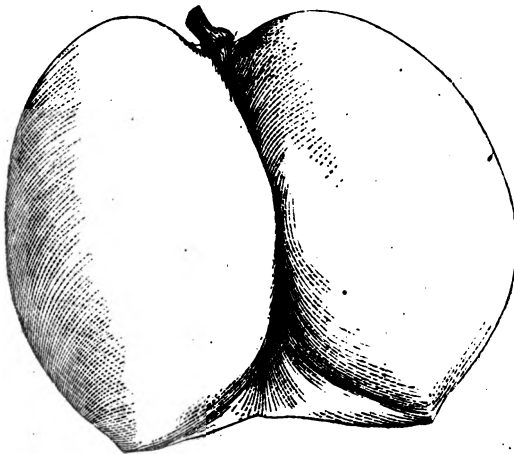


Fig. 1.—Twin Crawford's Early.

ting from those presented to President Lincoln by the ladies of the Horticultural Hall of the Philadelphia Sanitary Fair, which were separate peaches, on a single stem, and similarly lettered. The successful result of Mr. Pullen's contribution to the Sanitary Fair at Philadelphia is well known to most of our readers, many of the

lettered peaches bringing handsome prices. silk, stiffened by pasting paper at the back ; The one bearing the name of General Grant this is tied around the fruit just before it sold for twenty-six dollars. colors, the letters being on that side exposed to the sun. A few days is sufficient

The letters are cut through a slip of oil

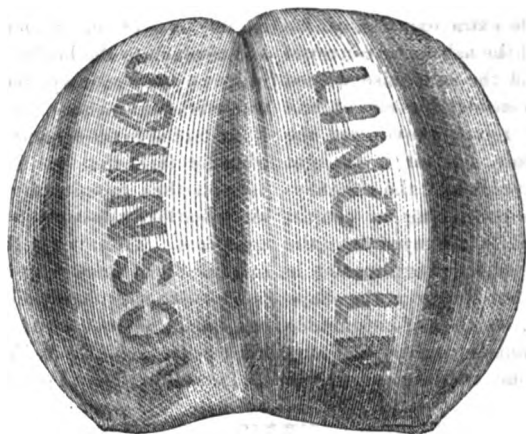


Fig. 2.—Section.

to complete the process. That part of the peach exposed to the sun through the openings of the letters and elsewhere, colors brilliantly, while the rest remains white.

Mr. Pullen's success in orchard-house culture is such as to attract a large share of attention from all growers and lovers of fine fruit.

AMERICAN WINES.

BY GEO. HUSMANN, HERRMANN, MO.

You have invited me here, a stranger, to read to you an essay on American Wines, and I must say have, I am afraid, sorely mistaken the man when you invited me to give you information on that subject, as I am no wine connoisseur. I am wholly unable to dissect a wine if set before me; to point out its peculiar excellencies and its defects. I can only say, when I find and taste good wine, that I like it, and when I taste a poor article, I do not. Truly were the theme not so inspiring, I would not undertake it all. But who can think of wine—the pure juice of the grape, *nota bene* good wine, without feeling in some degree elevated; and thus I will trust to the subject to do itself justice, with what little experience I may have to back it up.

First, I am told I am to say something

about good wine making. This is a very simple process; but to make good wine, you need, 1st. Well ripened grapes. 2d. Good, clean, vessels and casks. 3d. Careful hands to gather and press the grapes. 4th. A good cellar to keep the wine. I will say a few words upon each of them.

First. It is essential that the grapes, to make the wine, should be well ripened. It is not enough that they are well colored. But after coloring, they should hang four to six weeks longer, until some of the berries begin to shrivel on the vines. This is essential to make the wine of good body, and give it that delicate flavor and aroma, which connoisseurs designate by the name of bouquet.

Secondly. Good, clean vessels and casks. We may as well here include the wine

press, and its apparatus also, as shears or knives for cutting the grapes; in short, all the tools, which are called vintner's utensils. They consist of 1st. Good, clean tin or wooden pails. 2nd. A vat to carry the grapes to the press; high and flat on one side, which is carried on the back by two leather straps going over the shoulders, wide at the upper end and narrow at the bottom. 3rd. A large and wide vat or tub, called the fermenting vat, say seven feet wide, by three feet high, with a faucet on one side near the bottom to draw off the must. 4th. A mill to mash the grapes. 5th. The press. These two can be bought of a very convenient size and form, manufactured by Gaiss & Brosius, Belleville, Illinois, at about \$70, which are very handy, and unless a very large quantity is to be pressed, will answer every purpose. 5th. Casks of sufficient number and size, to suit the quantity of wine to be made. The most convenient size is from 150 or 250 gallons each, as they will not occupy as much room as smaller ones, and are yet small enough to be handled with ease. They should have a so-called door at one end, to facilitate cleaning. If new casks cannot be had, those in which Rhenish wine has been kept, Malaga casks or brandy pipes will also do, but they should be in good condition, not soured or spoiled by lying around empty. New casks should be scalded with boiling water, before the must is put into them.

Third. Only careful hands should be employed to gather the grapes. This is very important, as all imperfectly ripened berries, as well as all decayed and dry ones should be carefully picked out. The half ripe berries may be put into a separate vessel, to make an inferior wine. This is generally done while cutting the bunches, when all berries which are not perfectly ripe and sound are picked out by hand. They are then carried to the mill, which is generally set above the fermenting tub, on a frame, and run through the rollers into the tub, where they remain until pressed; say in ordinary weather about twen-

ty-four hours. If left longer, they will make a darker color, more astringent wine, which is not so pleasant to drink the first year, but will keep longer and improve by age; if pressed immediately, they will make a lighter colored wine, which is very pleasant to drink the first year, but will not keep as well. Before pressing draw off the must from the fermenting tub, which can be filled into the casks at once, and press the remainder. Some keep the two separate, but I think they are better if mixed as one improves the other.

Fourth. The wine cellar. This is very important, as without a good cellar, you cannot expect to keep your wine. It should be dry—enough below the ground to keep an even temperature in Summer and Winter. It is generally made in the northside of a hill, and arched over; say twelve feet deep, so that the door is even with the ground, with abundant ventilation, to keep it dry. The casks are laid on wooden frames, leaving abundant room to get between the two rows, and about three feet from the ground. They are then filled with the must, some preferring the *under* fermentation; that is, not filling the casks quite full, so that when the must ferments everything will remain in the casks; others preferring fermentation *above*, i. e., filling the casks full, so that the skins, etc., which may yet be in the must, may be thrown out of the bung hole by the fermentation. Both methods have their advantages, but I prefer the latter, with a very simple contrivance to exclude the air. This consists of a tin tube, built in the form of a double elbow, of which one end fits tightly in the bung hole, and the other into a dish of water, to be set on one end of the cask, through which the gas escapes.

The wine then remains in the casks until fermentation is over, when the bung is closed tightly, and it is left until perfectly clear, when it may be racked off into other casks. This should be done in February or January. Rack it off into good clean casks, taking good care to thoroughly scour the casks in which the must has fermented, as the lees

of the wine are very slimy, and must be carefully scrubbed off. A second fermentation will ensue in May or June, after which the

wine should be racked again, and it is then fit to bottle or remain in the casks.—*Transactions Ill. State Hor. So.*

THE VERBENA.

FROM "FLOWERS FOR PARLOR AND GARDEN."

BY EDWARD S. RAND, JR.

There are few plants which lend more beauty to the flower garden in summer, or enliven the green-house in the winter and early spring months in a greater degree, than the verberna. From the variety of colors, the rapidity of propagation, the little care needed to bloom the plant in perfection, and the abundance of blossoms, it is, and always must remain, a universal favorite.

In addition to these advantages, the facility with which new varieties are raised from seed, render it a favorite with the amateur; and in no collection do we fail to find the verberna, in some of its many varieties.

It is a difficult task to prescribe the culture of a plant so well known, and which will grow and flourish under such a variety of circumstances, and in such different situations. As every one has grown verbenas, each has his own peculiar mode of treatment, if, indeed, a flower requiring so little care can be said to have peculiar treatment.

In writing of a plant, from which seedlings are produced with such ease, and which sports into such an infinite variety of colors and shades, we cannot be too careful in expressing a decided opinion. Every year new seedlings are "brought out," and latterly the varieties have so multiplied that it is very difficult to choose those really worthy of cultivation: the favorite of this spring may, after a year's trial, be cast aside as worthless, for it may not be found worthy of general cultivation, or better varieties may have been originated.

Our verberna was introduced into England from Buenos Ayres, where it is indigenous, by Mr. Hugh Cumming, an ardent lover of nature, about the year 1825.

The first, and for a long time the only variety cultivated, was *Verberna melindres*, or

chamedrifolia; but it now appears lost among the new and superior kinds which have been raised from seed. In form, it has been repeatedly excelled, but its creeping habit and abundance of bloom must always recommend it, though we doubt if at the present time it can be obtained at any of our green-houses, and probably few of our younger cultivators have ever seen this once popular variety. The color is scarlet, and though perhaps equaled, can excelled. Many other earlier varieties may be mentioned, but, although interesting, it would too much extend the limits of this article.

Verberna multifida, with lilac purple flowers, was introduced from Peru; *Verberna Tweediana*, with rose crimson flowers, from Brazil; and from these, and a few other varieties and seedlings, have sprung all the numerous varieties, many hundred in number, which may be found in extensive collections. The credit of introducing this plant into the United States belongs to Robert Buist, of Philadelphia. About the year 1835, from seed received from Buenos Ayres, he raised the first white, pink, and crimson verbenas. The plant soon became generally known, and was everywhere a favorite; in the floral world it caused quite an excitement, and the original kinds were soon surpassed, in every respect, by newer seminal varieties.

The culture of the verberna is very simple. The plants will bloom with very little care, but to grow them in perfection requires attention; of thousands of plants of any size, scarcely one is a fine specimen. Let us, beginning in early spring, trace the plant, as generally grown, and then see how much a little care might increase its beauty.

About the first of February, cuttings of

the young shoots are taken from old plants : they will be ready to transplant. Pot them in a sandy loam, a few weeks, and sometimes a few days, will suffice to root them ; they are then potted off into thumb pots, and, if placed near the grass, will soon show a terminal flower. As soon as the season is sufficiently advanced, these young plants are bedded out, and, in favorable seasons, soon form a conspicuous feature in the flower garden, continuing to bloom till long after the early frosts. About the first or middle of September, the gardener begins to re-pot his plants for winter, and the common practice is to take a runner, which has rooted well at a joint, and, after suitable pruning, to pot it for winter blooming and propagation. Others, again, take up the old roots, while others, by sinking pots in their verberna bed, about midsummer, allowed the runners to root directly in the pots ; the pots being taken up, and the connection with the mother plant cut, the young plant receives no injury or check. But this mode is very objectionable, for two reasons ; first, the loam in the pots is apt to become sour and sodden ; and again, earthworms often enter the pots and prove injurious during the winter. The plants are housed, and, for a long time, produce no flowers, and are any thing but ornamental. Soon after the new year, they begin to grow vigorously, but are allowed to trail carelessly over the staging, or droop from some hanging shelf. No care or attention is bestowed upon them, except to give the daily supply of water.

The days grow towards spring. Cuttings are again taken off ; the same process is repeated year after year ; and thus one of our loveliest flowers, which, with a little care, might be one of the greatest attractions and ornaments of our green-houses, is never seen in perfection, except in the garden.

That this is the fact, is to be deplored ; yet the remedy is simple. By beginning about midsummer, we may have verbenas in bloom as well during the winter as the spring months. About the first of August, or earlier, cuttings should be taken from desirable varieties. In a fortnight

they will be ready to transplant. Pot them in thumb pots, and re-pot as soon as the roots touch the sides of the pot. Keep them in vigorous growth by affording plenty of light and air, being careful they never suffer from want of water. Pinch off the leading shoots, to cause all axillary buds to break, and in no case allow them to bloom. Train the plant in any form desired, but be careful not to permit it to grow too straggling. When other plants are housed, remove your verbenas to some warm shelf, where they may have the morning sun, and on every favorable day give plenty of air, and fumigate well to destroy green aphids. Your plants will soon be in luxurious bloom, long before those potted in the common way have shown a bud, and will continue to afford an abundance of flowers until late in the spring. To grow verbenas well in the house in summer is far easier. They may be bloomed in pots of any size, and trained in almost any form, the only requisites being plenty of light and air, careful pruning, and means to destroy aphids and keep off mildew.

One great fault in growing verbenas is the practice of watering too copiously. The plant, as originally found, grows on dry hills ; and damp not only produces mildew, but rots the roots, and thus destroys or produces disease in the plant.

The proper soil for verbenas, is two parts of loam, two of leaf mould, with an admixture of sand, and in this we have found them grow and bloom luxuriantly.

Many verbenas, which for green-house blooming are unsurpassed, are worthless for bedding purposes ; the petal of the flower being too thin, or the color fading or changing. Again, some bloom well in winter, others far better in summer ; some form large masses and flower well, others are of rambling growth and poor bloomers ; some of creeping, others of more upright habit ; while a few possess every desirable quality ; and in making a selection, all these properties are to be considered.

We have said that seedlings were produced with great ease. The verberna seeds well where the plants have not been too

long propagated by cuttings. A long-continued propagation by cuttings seems to diminish the power of the plants to produce seed, and as a general rule, the further removed the plant is from a seedling, the less the chance of its perfecting good seed. The seeds may be sown in a hot-bed or green-house, early in spring, and the plants, when about an inch and a half high, pricked out in the border; it is a good plan to pinch out the leading shoot, as thus the plants branch and become stronger; the plants grow rapidly, and soon show bloom.

But to raise a seedling is one thing, to raise a fine seedling, a far different. Of many hundred raised in the course of the last few years, by the writer, not more than half a dozen have been worthy of preservation, and only one (and that produced by chance) really a first-class flower.

In raising seed, much may be done to insure its quality by planting fine varieties together, and allowing them to intertwine, then gathering the seed from these plants. No rule can be laid down to obtain any desired color, for the seedlings sport infinitely. We can only approximate towards definite results; thus, if we plant Annie (white) and Robinson's Defiance (red) together, the seedling will be likely to be pink.

The flowers of the verberna are of every color and shade, except light blue, which color has never been obtained. A good yellow verberna has not yet been produced.

There is a miserable variety, with a small truss of dirty yellow flowers. The writer, some years since, by a curious process of watering and fertilization with a white verberna, obtained a seedling, which proved, on blooming, to be of a light straw color; the plant was weak and sickly, and died before cuttings could be taken. Since that time he has tried the result often, but never with any successful result.

The qualities of a first-class verberna, as laid down by the florists, are: roundness of flower, without indenture, notch, or serrature; petals thick, flat, bright and smooth; the plant should be compact, with short, strong joints, either distinctly of a shrubby habit, or a close, ground creeper or climber: the trusses of bloom, compact, standing out from the foliage, the flowers meeting, but not crowding each other; the foliage should be short, broad, bright, and enough to hide the stalk; in the eyed and striped varieties, the colors should be well defined and lasting, never running into each other, or changing in the sun.

As a window plant, there is nothing that will give more bloom than a verberna. Let it be trained on a trellis, and give it all the sun possible; the more sun, the more bloom. Pinch the shoots, to prevent its becoming too rambling, and give air enough, and your work is done.

The production of seedlings, as above directed, is a very pretty amusement, and very simple. Seedlings will bloom in three months, from the seed.

COUNTRY SEATS.—No. II.

BY E. H. C.

MESSRS. EDITORS:—In the May number of the *HORTICULTURIST* you kindly opened your columns to an article under the above heading, which we intended should be followed, in due succession of months, by two or three more of the like tenor; but several circumstances, which it is needless to expose, have prevented the fulfilment of that purpose until now. With your permission we will renew our examination of this sub-

ject, confining our remarks in the present communication to the matter of ADAPTATION.

By the term adaptation, I mean such choice of style, material, size and arrangement as shall fit the structure: 1st, to the site; 2d, to the climate; and 3d, to the uses for which it is built.

And, first, as to the site: It would be obviously incongruous to erect the same

house on these two different sites, with their different characteristic features and surroundings; for example, *the one* a nearly level plane, gently rising, perhaps, as you approach from the road, the position where the house shall stand, and sloping away again towards other broad green fields and the fertile meadows beyond—with no background of hills or mountains, no irregularly formed lake, but with a placid, lazy stream, half-sleeping, half-gliding by the weeping elms, and among the scattered groups of stately, old trees :—*the other*, a romantic hillside in the native forest, with its neighboring mountain range, where in the bright summer-time, the noisy, laughing brook keeps time to your thoughts and fancies as you wander among the hills, and in the bleak winter the winds sigh mournfully through the pines or utter their clarion calls to the spirit of the storm.

The one situation would be appropriate to the Italian villa, with its flat roof, and overhanging cornices, its spacious verandahs and balconies, all having that depth and boldness and variety of outline necessary to secure the proper effects of light and shadow, which the absence of all variety of form in the landscape would render indispensable. But no man with an artist's eye would think, for a moment, of building such a house as this on our wooded hillside. He would construct there his English cottage in good solid stone, whose steep roofs would shed with facility the summer rain and the winter snow, whose irregularities of form and outline would harmonize with nature's Gothic work in precipice and rock, in trees and climbing vines. Or else, he would place there his Swiss chalet, which would be in harmony with the scene, and a pleasing object to the eye of the observer. On the broad, open plane the villa should be made, or seem, to cover a considerable space, while the nice cottage might be built more compactly.

But here let me remark, that many of our attempts at the English cottage, generally known as the Gothic, have been failures, and some of them sad abortions. This comes from defective models and plans, and

these defects arise mainly from these sources, the lack of boldness and variety in the main-outlines, and in the construction of the roofs and chimneys. Such a cottage, to be pleasing and satisfactory, must have irregularities in form, variety in ornament, and boldness in treatment. A square house with additions of gables, and dormers and pinnacles, and ridge crests, will not give us an English cottage. It is a work of art, like a poem or a picture, and not a mechanical aggregation of Gothic features and ornaments. I was about to say that it should never be attempted in any other material than stone, but as many of us cannot command the means for such permanent buildings, I will concede that it may be allowable for us to put our wooden buildings into the cottage form, using the best taste and the most beautiful and picturesque styles, even if the material is objectionable.

One other observation, before we return to our main topic, may be indulged. It is simply the suggestion that too little attention has been paid to the *sky-outlines* of our country houses. Roofs and chimney-tops have been treated as necessary evils, instead of being made, as they may be, highly ornamental. The unity of the plan, as a work of art, is lost as you ascend above the eaves, all the rest seeming like excrescences growing out of structures otherwise commendable and satisfactory. The superior horizontal lines of the roof will depend somewhat upon the back-ground of the house. When a building is placed upon the crest of a hill, or upon a slope descending from the main point of view, so that its outlines are seen against the sky, the treatment of the plan will be obviously different from that required where the back ground is solid, as a hill or a forest. In any case, however, the horizontal lines should be broken, as far as practicable, by making the roofs of the several parts of the house of unequal height.

It will be apparent, without special argument, that our choice of style in our country houses should be controlled essentially by the climate. In our northern climate, the flat roof is objectionable, and we are obliged to modify the Italian styles

somewhat in this respect, to obviate inconveniences. The hot summer sun, when, as on this August day,

"The pavements all are piping hot,
The sky above is brazen,
And every head as good as dead
The sun can shed his rays on,"

Will be more than likely to open the joints - and seams of the flat roof, and the sudden shower coming down with the force of a tropical storm, will find its way through, sadly to the detriment of our ceilings, our stuccoes and frescoes, as well as to the comfort and the commendable equability of temper of those who suffer the invasion. The heavy winter snows, too, require a steep roof, from which they will readily dislodge themselves without injury.

And so in the interior arrangements of the house, the provisions for heating and ventilation, for summer freedom and winter coziness, for domestic comfort and the exercise of the commendable grace of country hospitality, due regard must be had to the conditions of climate. There must be a proper adaptation to them, if we would secure satisfactory country homes.

And this brings us to our last topic, the uses for which our country seats are built. The place designed simply for a summer residence for the citizen, who is obliged to be at his office or counting room daily, bating the few weeks of summer vacation, need not be so complete in its appointments and arrangements, as the permanent country residence. One essential condition, however, in this case is, that there shall be *room enough*, with ample verandahs, and shaded gravel walks, which will afford opportunities for open air exercise in all states of the weather. There is nothing, perhaps, that interferes so essentially with the citizen's enjoyment of the country, as

the want of facilities for out-door exercise. It is too hot or too dusty to ride or walk, before the shower, and after its refreshment has come, it is too wet and muddy. Spacious verandahs, shaded with vines, and well-made walks, always firm and dry, bordered with shrubbery, or overhung with trees, will give us "ample scope and verge enough."

But the uses of country seats depend mainly upon the tastes and habitudes of the occupants; and their adaptation in style, size, and arrangement should be accordingly. I believe there is no law against a man's building an elegant library and picture gallery, though he may have no taste for literature or art, but having plenty of money, chooses to make this display of it. There are a great many absurdities to which poor, frail humanity is liable, against which the legislature, in its wisdom, has not thought it worth while to make solemn and positive enactment; and it is better for the general moral condition of society, perhaps, that the vulgar rich man's ambition for display should manifest itself in books and pictures, rather than in fast horses. Might not the cultivation of the garden—vegetables, fruits and flowers,—take the place of both, as simple means of display? These are wholesome and agreeable employments even for those who have passed that time of life when a taste for books and art may be acquired.

A country seat should combine and express the real uses which are required by the intellectual and social condition of its occupants, and not attract attention as blazoning the wealth and money importance of the owner. If he is rich, let him make it as complete and simply elegant as he will, and this he may do without proclaiming to every passer-by his miserable pride of wealth.

ORNAMENTAL TREES.—GINKGO TREE.

Salisburia Adiantifolia.

This tree, with name so outlandish, is one of the most beautiful, and at the same time curious, of trees used for ornamental purposes. As might be inferred

from its name, it is of Oriental origin, considered by botanists to be a native of the Island of Nippon, and of parts of Japan and China. It is a deciduous tree.

of the first magnitude, and attracts attention as well as admiration by the singularity and beauty of its foliage; seemingly a blending of the Coniferae with the Corylaceae. It is known among botanists by the name *Salisburia*, so called in honor of that distinguished botanist, R. A. Salisbury. It is also called the maiden-hair-leaved *Salisburia*.



Foliage of Ginkgo Tree.

In its native habitat this tree is said to be a rapid grower, and to attain to a great size, like the Walnut tree, but more conical in its outline. The leaves, which are its principal beauty, are of a triangular or wedge shape, and of the same color and texture on both sides, and disposed alternately, like the branches; they are smooth, and brilliant, of a fine light or yellowish green hue, and ribbed in numerous parallel lines, lengthwise of the leaf, instead of like the leaves of other deciduous trees, which are ribbed from a single centre rib. These leaves too, being attached by long slender stalks, tremble in the breeze, not unlike the aspen. The tree produces a fruit or nut, having somewhat the flavor of the almond, which in Japan is much prized, according to Kämpfer, being never omitted at entertainments, and entering into the composition of numerous dishes.

The specimens in this country are com-

paratively rare, although one of the best known extant is at "Woodlands," near Philadelphia, imported by Mr. Hamilton in 1784, and being upwards of sixty feet in height.

An amusing anecdote is related as to its introduction into France, quoted by Loudon from M. Andre Thouin: "In 1780, a Parisian amateur, named Petigny, made a voyage to London, in order to see the principal gardens, and among the number of those he visited was that of a commercial gardener, who possessed five young plants of *Ginkgo biloba*, which was still rare in England, and which the gardener pretended that he then alone possessed. These five plants were raised from nuts that he had received from Japan; and he set a high price on them. However, after an abundant *déjeuné*, and plenty of wine, he sold to M. Petigny these young trees of *Ginkgo*, all growing in the same pot, for 25 guineas, which the Parisian amateur paid immediately, and lost no time in taking away his valuable acquisition. Next morning, the effects of the wine being dissipated, the English gardener sought out his customer, and offered him 25 guineas for one plant of the five he had sold the day before. This, however, was refused by M. Petigny, who carried the plants to France; and as each of the five had cost him about 120 francs, or 40 crowns (*quarante écus*), this was the origin of the name applied to this tree in France, of *arbre aux quarante écus*; and not because it was originally sold for 120 francs a plant. Almost all the *Ginkgo* trees in France had been propagated from these five, imported from England by M. Petigny."

There are some very pretty specimens on several of the fine places in the neighborhood of Newburgh on the Hudson, in which climate the tree seems to be perfectly hardy. This tree is said to thrive best on a deep sandy loam, but not on wet or cold soils.

As the tree is one of remarkable beauty, both in foliage and symmetrical proportions, and of cleanliness of habit, as well as uncommon, we would respectfully present it

to the acquaintance of all planting gentlemen as a lawn tree, and as fit for good society; only bespeaking for it on its *entrée*

good treatment, and a position not too exposed.

MY NEIGHBOR, MRS. NYMS.

Out from the village, a couple of miles or so, on a road leading to one of our most charming and romantic lakes, lived my friend and neighbor, Mrs. Nym. It was a delightful drive, through a rich and highly cultivated country, and the hospitality which greeted our visits was hearty and earnest, so that several times between the vernal and autumnal equinox of each year, it was our wont to visit our neighbor, to share with her and hers, the seductions of "the cup which cheers, but not inebriates."

Of course we do not fancy that the relation of such incidents as these in our "simple annals" can in any wise interest the readers of the HORTICULTURIST, but there were certain things in the surroundings and belongings of our neighbor, and a certain moral which we intend to draw from our brief narrative, for which we claim the reader's indulgence, and to which we solicit his attention.

We have mentioned Mrs. Nym. Let it not be rashly concluded that there was no other moiety—no *alter ego*—but let it rather be understood that as she was the better half, her name naturally comes uppermost whenever we recall those long-gone days.

As we have said, the country was rich, highly cultivated and productive. The ample barns and well-stored granaries afforded incontestible demonstration of the fertile soil and the successful husbandry. My neighbor, Mr. Nym—to put foremost for the nonce one whose native modesty and habits of association and domestic discipline made him usually content to remain in the background—was the owner and occupant of one of the best of these farms, the co-partnership in the possession being as aforesaid. The products of his fields, his dairy and his stock furnished him ample means for comfortable living, and for the supply of such

superfluous indulgences as the tastes and habits of the family required. But unfortunately the tastes of the gentler side of the house were not altogether rural, my neighbor Mrs. Nym being more addicted to letters and to art than to country employments and horticulture. The natural consequence was obvious and visible. The large, square, old-fashioned country house wore a look, externally at least, of neglect and desolation, as if it were disgusted and discontented with its surroundings. The fences and the gates, and the outbuildings, individually and collectively, were so habitually neglected, that they had long forgotten all the rules of unity and coherence, and were gladly falling asunder and parting company. The front yard was overgrown with weeds and briars, with here and there a rose-bush of some remote planting, perhaps in the time of the megatherium, or a lily which had struggled up to the light through the rank grass, or an illegitimate holly hock or sunflower, staring impudently over the fence at the innocent traveler on the high road. The Lombardy poplar that grew by the gate was mutilated by the storm, and half decayed by length of years, while the broken limbs lay scattered where they had fallen. The cherry and plum trees were untrimmed, broken by the last year's depredators, and disfigured by all the excrescences and diseases which such trees are heirs to, and the small kitchen garden—there was no other for fruit or flowers—was innocent of all culture save the rudest planting. The whole aspect of the place was bare, uninviting and desolate. There was no home look—we cannot conceive how there could have been any home feeling. The impression of external things upon a strange visitor must have been very uncomfortable, and his first impulse would be to

turn away, and as Charles Lamb expresses it, "to stammer a bow, and take his departure."

And yet my neighbor, Mrs. Nyms, was not desitute of a sort of culture, and of some real worth. It is true she was sadly superficial, affecting what she supposed were elegant tastes, buying, and perhaps reading, some of the new volumes of poetry and romance, but confining her literary perquisitions chiefly to the *Lady's Book*, hanging her parlor walls with engravings in staring gilt frames, and filling her cabinet with shells and geological specimens. She was wont, too, to court the Muse in her own person, and to hold dalliance in the realms of poetic inspiration. With what success we cannot judge, but we do not remember to have seen the name of *Nyms* in that bright constellation of female poets which illuminates our heavens, and sheds its serene influences over our American homes.

My neighbor was good-hearted, hospitable, and sincerely attached to her friends, and more is the pity that she failed to adapt herself to her station in life, making herself useful therein, and her house the pleasant abode of comfort and all homely enjoyments. Even with their moderate means they might have had an elegant home, had it not been for her silly affectation of what she mistook for elegant tastes, and her ambition to shine in literature, for which she had no aptitude or culture, and to make personal display in fashionable and costly dress and adornment.

And this is not intended to disparage or discourage aspiration in those who are in a moderate, or in any station of life. Let us seek as we will higher culture, purer tastes, loftier attainments in knowledge as well as in goodness. These are noble aspirations, and nobody will discourage them, and nobody need blush to confess that he is moved by them. But while we cherish and indulge them, we may not forget or overlook our near relations, and the duties that belong to our state of life, whatever it may be.

With my neighbor, Mrs. Nyms, literature and conchology, and whatever else she af-

fectured, while the homestead was slowly going to ruin, were only elegant or pleasing toys. The time and money expended in these pursuits, whose fruit never ripened, would have remodeled and repaired an ugly house, rebuilt the dilapidated fences and offices, laid out and planted her garden with choice fruits and flowers, lined the bare road-side with trees, and filled her empty lawn with choice shrubbery. We have known her to take a long drive to visit an old sea-captain, to procure some rare shells to add to her collection, and this, we fancy, not from a love for science or a knowledge of its relations and teachings, but for the gratification of mere curiosity. If she had taken equal pains to procure trees and shrubs, it would have given her quite as much and as lasting gratification, and her husband and children something more of comfort and content.

In truth, let it be said deferentially and reverently, as due to woman, the great mistake she made was in foolishly thinking her station in life beneath her and despising it, while she aspired vaguely to something she could not appreciate, and for which she was not fitted. — This is a mistake which weak people—men and women—often commit. They underrate their condition. They despise the capacities and dignity which belong to it. They are *out of sympathy* with all that properly interests and concerns them, and by the inevitable rule of cause and effect, they are themselves discontented and uncomfortable, and they make the whole circle of their daily associates and dependents unhappy.

So it was with my neighbor, Mrs. Nyms.

MORAL.—Take warning, gentle reader, by the example we have so imperfectly outlined. Read the *HORTICULTURIST* instead of the *Lady's Book*. Study landscape gardening instead of fashion plates. Cultivate flowers and fruit, instead of poetry and sea-shells, and while you aspire as best you may towards the loftier and the better "do your duty in the state of life to which it has pleased GOD to call you."

HEDGES.

BY S. T. D.

We invited the attention of the readers of the August number of the *HORTICULTURIST* to the subject of stone fences, for the exterior inclosure of country places, in localities where that material can be readily obtained. It is, obviously, the most economical fence that can be built, if built well. The foundation should be laid so deep and broad as not to be sensibly affected by the action of the frost, and the wall itself laid with care in the selection and fitting of the stone. It will stand, then, with such occasional oversight and repairs as a good farmer would bestow, at proper seasons, almost "as long as grass grows and water runs."

It need not be too high, but should rather be broad, in order to secure the fit appearance as well as reality, of strength and permanence. If considerable height is required, for the protection of the fruit or garden within, let the wall be surmounted with iron pickets. The English custom of surrounding ornamental grounds with high solid walls, which we occasionally see imitated in our country, seems to us exceedingly exclusive, selfish and objectionable. If a gentleman has means and taste to expend upon a fine country place, we can conceive no good reason why he should shut out the view of his lawns and gardens from those who are passing along the high road and through the shady lanes which border or intersect his grounds. All necessary seclusion and privacy may be secured by hedges and plantations of trees and shrubbery, which shall serve also to enhance the charms and increase the beauty of which the traveler obtains glimpses. One great source of happiness to a right-minded man is the ability he possesses of imparting gratification to others. Why, then, should he selfishly shut out from the view of such as can admire and enjoy, but perhaps may not possess, such grounds as are his pride and the source of many of his best and purest enjoyments?

The permanent interior divisions of a country place need not be numerous. There is a peculiar charm in broad fields, unintersected by walls and fences, where the eye can range at will, and take in the wide view of sloping lawn, and hill and stream, dotted over, here and there, with clumps of foliage and single trees. There is a breadth to the picture which is sadly marred when the eye is arrested by unnecessary and uncomely fences. Where such permanent fences are indispensable, let them be hedges, which will readily blend with the other features of the landscape, and by losing their individuality, lose also their prominence.

The Kitchen Garden may be effectually screened in this way, while on the north side there may be a wall against which fruits may be trained, backed by a tall hedge which will break the cold winds, and afford admirable protection.

For such temporary purposes as may be desired, such as separating a portion of the lawn or field for pasturage after gathering the crop, hurdles may be used. They are easily set and removed, and with proper care will last for many years.

It is not the design of this present paper to indicate the best material for hedges, or the proper modes of planting and keeping them. Care will be required both in setting and trimming, and in proportion to the labor bestowed, as far as is requisite, will the results be satisfactory. No one can reasonably expect to grow a perfect and handsome hedge from imperfect planting in a meagre soil. The ground must be thoroughly prepared, and like care bestowed upon the plants as would be given to any shrubbery or fruit trees, and the result will be corresponding.

The Osage Orange makes an admirable hedge. It is a rapid growing shrub, and sufficiently hardy to be reliable. The *Althea*, the *Privet*, the *Lilac*, and the several members of the *Thorn* family, are all of them

well enough known for these uses, and need no further description. They can be planted in different places as needed, and according to the taste of the proprietor, with great effect in heightening the beauty of his grounds.

But, undoubtedly, the most beautiful hedges are the evergreen. Nearly all our evergreens, we believe, will bear the knife, and flourish under the treatment necessary to be given to hedges. And of all the variety of evergreens for such purposes, we have nothing superior to the Hemlock. Indeed, in the whole American Arboretum, we know no tree that equals the Hemlock among the evergreens. It is a very common tree in many parts of the country, and

as found growing in the thicket, crowded by other trees, it is sometimes distorted and gnarled, and less attractive to the eye than many others. But give the Hemlock a fair chance in your lawn, with such cultivation and enrichment as it needs, and you will see what a marvel of evergreen beauty you will have in a few years.

Or plant it in a hedge. Give it adequate attention and care—it will require no more than any other plant. Use the knife freely. Take a little pride in it—make it moderately a pet, and if you have a soul within you with capacity for appreciating and liking a luxuriant, unsurpassed, perfect evergreen hedge, you will say with S. T. D.,

LONG LIVE THE HEMLOCK!

THE ADIRONDAC GRAPE.

BY JOHN W. BAILEY, PLATTSBURGH, N. Y.

In your August number I notice an article by F. C. Brehm, of Waterloo, N. Y., on "Delaware and Adirondac Grapes."

Mr. Brehm is surprised to see that the premium "for the best native grape, quality to rule" had been given to the Adirondac, when the best of our native grapes, "the Delaware," was competing for the prize; and he cannot understand how a committee of impartial judges, who profess to understand fruit, could make such an award, and he calls on the committee to explain. He proceeds to enumerate the high qualities of Delaware. On that branch of the subject it does not concern me to answer. I think very highly of Delaware, and it does not enter into my purpose to detract from its justly high reputation. The names of the eight gentlemen composing the two committees in New York and Cleveland are, in my opinion, a sufficient guarantee for the correctness of the awards.

It would appear from Mr. Brehm's article that he had the Adirondac bearing fruit last season, that it grows too strong to be easily managed, and that it lost nearly all its foliage from mildew, and the fruit color-

ed: and to the 1st October it remained hard, pulpy and flavorless, when all his other grapes had been gathered. From these facts he proceeds to charge interested parties with persistent efforts to gull the people by claiming that it is earlier, better in quality, and healthier than the noble Delaware, which he says are simple falsehoods. Mr. Brehm is a little too fast. Nobody that I am aware of ever claimed that it was more healthy than Delaware. I find them both equally and perfectly healthy. The Adirondac is two weeks earlier than Delaware, and it is the privilege of Mr. Brehm and every other person to suit their own tastes, which do not always agree. Mr. Brehm is the first case reported of mildew on the Adirondac. I have had it on my grounds four years, and perfectly healthy up to this time, and I shall be most happy to show my bearing vines to all persons who feel interested, and they can compare it with Delaware, Concord, Diana, &c., as to earliness, quality of fruit, etc. Does not Mr. Brehm know that when his vine was deprived of its leaves, it was impossible that the fruit on it could

ripen, although it would change color? How is he to know whether it is early or late?

I need say no more. The Adirondac is bearing fruit in different sections of country this season, and the public will hear of its success or otherwise. The fruit will be shown and freely distributed, and will vindicate its own reputation from all unjust attacks.

EFFECT OF THE DROUGHT ON EVERGREENS.

We have observed very serious effects of the recent drought and scorching sun, on the tender and slow-growing evergreens—particularly the Juniper. We have seen beautiful Columnar Junipers which had been successfully developed by great care, and attaining considerable height without a mar or blemish, terribly disfigured on the sunny side. This is one among the various trials and vexations that all arboriculturists are liable to, but nevertheless it is one which may be successfully guarded against, by what may be called, the ounce of precaution—the pound of cure is in such cases almost if not entirely worthless. A tree of this description so disfigured is marred forever, and it is really too bad to see such specimen trees which have so far been carefully tended and well-managed, and just yielding a reward for the labor, spoiled by the want of a little forethought.

The precaution we recommend is simply this:

1st. To loosen the baked ground for some distance around the trunk of the tree, and then to heavily mulch it with grass or hay or anything which will not readily ferment and evolve heat; occasionally wetting down the mulching.

2d. To place against or near the tree on the sunny side, some branches of evergreens, or even deciduous trees, so as to break the direct rays of the sun and shade the foliage. This is a very practicable and simple precaution, worth all the cure you can find.

THE ADIRONDAC GRAPE.

BY PRATIQUER.

"It does appear," says Mr. Chorlton, "as if some persons wish to make it go through a more fiery ordeal than the same individuals are satisfied with under other circumstances," and this in reply to a simple inquiry in which we say, "We want light, and *must have* it, before we plant extensively."

I have a great respect for Mr. C., though unknown personally. He is my "grape grower's guide" and preceptor in the cold, grapy, and this way of putting it is so unlike his calm and temperate manner of dealing with a subject, that I naturally inquire with the little boy who found that whatever he did was disapproved by somebody, "What has little Eddy done now?" An opinion expressed in the month of May, and published in June, that the leaf grown under glass had the appearance of the *Vitis Vinifera* may not be orthodox, but it was honest, and was expressed with no intention to give the Adirondac "fits." The main object at that time was to elicit information as to its hardiness, and this question seems not yet to be answered. No one appears to be ready or willing to pledge his reputation upon it. The public presume it to be hardy, for it originated in a northern climate 44 deg. 40 min., but Mr. Bailey's statement, backed up by Mr. Weatherby, leads us to suppose that it is not hardy, for they persist in "laying it down and covering every winter." The climate of Port Henry or Plattsburg is really no evidence, having the advantage of mountain shelter, and the ameliorating influence of a large body of water, Lake Champlain, which together, make the

season longer, and ripen fruit better than in a lower latitude, aside from these influences. In subjecting this grape to this fiery ordeal, let us not lose our patience. Mr. Chorlton has certified to the *quality* of this grape, and now let us have equally good testimony as to its hardness and earliness. We want facts. Will the producers of it expose the vine as they do the Delaware, inform us in what latitude they so expose it, and report results. Will they also state when and where the fruit colors, and the day of the month when it is really ripe and has the Hamburg flavor. If the grape is a good one and desirable, we know that the HORTICULTURIST is willing and anxious to say so; if it is not, its readers should be warned in time to invest but small sums in it. For my own part I have no desire to prejudice the public against it. What I want is the *truth*. If Mrs. Weatherby did not plant the seed in a pot, I do not wish to prove

that she did; but I may be permitted to inquire if any one else did, or how the story originated? Can Mr. Shepard enlighten us? Will Mr. Bailey himself do it? Will Mr. Mead? Will Mr. Downing?

The truth will do no harm, provided that it is all right. Refined gold is all the brighter for the fiery ordeal. We look forward to a grape millenium. We know that a degree of perfection will be attained in a native out-door grape, that there is a good grape coming. We only wish to be sure when it does come, which is *this*. If it is the Adirondac let us all rejoice together, and accept it. I have been so often disappointed that I am anxious to "prove all things," and shall "hold fast that which is good." When the new candidate crowds the Delaware down on the list, I shall hope to be one of its admirers. I therefore repeat the inquiry: What day of the month is it ripe in the open air? And is it hardy?

EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Address all Communications for the Editorial and publishing departments, to GEO. E. & F. W. WOODWARD, 37 Park Row, N. Y.

WE call the attention of our readers to the article on Grape Grafting in this number. This subject has interested many of our most prominent grape-growers; and articles like this, giving practical results, must necessarily be valuable to all who have attempted this mode of treating the grape. We invite those who have had experience in this matter, to furnish us with the results.

WE extract this month, from "Flowers for the Parlor and Garden," by Edwd. S. Rand, Jr., of Boston, the article entitled, "The Verbena," probably the best written article on this subject ever published in this country. Those who have read the article in Mr. Rand's book, will, no doubt, find a second perusal agreeable and profitable;

those who have not seen it, will do well to obtain this very elegant treatise on flowers. It is published by Messrs. J. E. Tilton & Co., of Boston, at three dollars per copy. We do not know of a more beautiful or acceptable book for presentation, or for the parlor or library table.

THE trees on Boston Common have been labeled with the popular scientific names of each—a good way of teaching the people something of arboriculture.

THE Sandusky *Register* says that there will be quite a crop of grapes on the Islands in Lake Erie, this season, and that the quality of the fruit and the size of the clusters will be superior. As yet there are no indications of rot, and the growers are hopeful that it will not make its appearance.

FOURTH OF JULY APPLE.—We are indebted to A. G. Hanford, Esq., of Columbus, Ohio, for a box of fine specimens of this fruit. We give an engraving and description in our present number. The fruit is exceedingly beautiful in appearance, and will command attention from this alone; flavor, a brisk but pleasant acid.

WE are indebted to Mr. C. F. Erhard, of Ravenswood, L. I., for a basket of fine pears of the variety known as the Ravenswood. This pear was illustrated in our August number, 1861. It is a seedling found growing wild; its season is about the first of August, but is now (Aug. 18), in good eating condition. In size it is small, but of fine quality and deserves a high rank among early pears.

THOSE of our readers who desire to secure the back numbers of the *HORTICULTURIST* can do so by early application. The *HORTICULTURIST* is not stereotyped, and no copies can be supplied beyond the stock on hand, which is now quite small. We can probably supply one set from the beginning, in 1846, bound in cloth, at two dollars and seventy-five cents a copy. Two sets from 1854 to the present time, at two dollars and seventy-five cents a copy. Eight sets from 1860, including the volume for 1864, ten dollars, and with subscription for 1865, twelve dollars. New subscribers to the twentieth volume, 1865, can procure the volumes for 1863 and 1864, bound, in addition to the numbers, for 1865, for five dollars. The set from 1860, to date, is complete within itself, and is fully illustrated. The volumes for 1860, '61, and '62, contain about 18 finely colored plates. Address Geo. E. & F. W. Woodward, Publishers, 37 Park Row, N. Y.

PREMIUM LIST OF THE NEWBURGH BAY HORTICULTURAL SOCIETY.—The fourth annual exhibition of this society takes place at Newburgh, on the Hudson, on the 28th, 29th and 30th days of September. The highest premium, that for the best and

most general collection of fruit, is twenty dollars, and liberal premiums are offered for the best, 2nd best, and 3d best of all varieties of fruit. Premiums are also offered for vegetables, flowers, for the best vineyard of half an acre, and for the best native grape wine, both pure and otherwise. The vicinity of Newburgh bay is a famous fruit locality, and this society has heretofore made some of the most magnificent displays of fruit, &c., that we have seen. The material, energy, and financial ability to do this well, exists in a high degree among its members.

WHOLESALE PRICE LIST OF REID'S NURSERIES.—ELIZABETH, N. J.—D. D. BUCHANAN, SUPT.—This nursery, under the management of the late Wm. Reid, acquired a very extensive reputation as one of the neatest and best kept in the country. The specimen hedges of all varieties of hedge plants, both evergreen and deciduous, were universally admired. Under Mr. Buchanan's superintendence its attractions and fine keeping are preserved, and to those who can conveniently do so, it will well repay a visit.

SCHROEDER VINEYARD, BLOOMINGTON, ILL.—Location in town 23, range 3, east; my land that I cultivate for fruit is sandy loam timber soil; subsoil is stiff clay; native growth white oak, burr oak, red oak, hickory, white elm, honey locust, white grape and hazel; aspect of vineyard and fruit garden southeast. Elevation about 40 feet above Sugar creek; is protected east, south and west by timber land and cemetery; my vineyard and fruit garden were planted five years ago; my grape vines were raised by layers from old wood; trees I bought from nurseries; my vineyard, containing 10,000 vines for bearing is planted (the land was double ploughed), on ditches, 2½ feet deep and 2 wide, filled with broken bones, sods and brush to one foot, and then filled with the soil; rows 6 feet apart; vines 4 feet; [too close in the row; they want 8 feet on my system]; between the grape rows 1.

planted strawberries in 26 varieties for the last 5 years, all cultivated by karst—kind of hoe—by hand. Sold \$600 worth this year from about 2½ acres between grape rows; vines were not covered last year; my vine pruning is different from any other; Mr. Louis Koch, in Golconda, Ill., and myself are the only vineyardists that trim my way; Mr. Koch is the inventor also of the kind of trellis that Mr. Knox speaks of. Mr. Koch is the father of this espalier. He has had it for ten years. I cannot give you in short my method of pruning; three eyes for fruit bearing, one for wood. My vines have two stories, with 60 fruit buds, each 2 grape bunches, 3 to a pound, make 40 lbs. or 3½ gallons wine when finished in form, which is in the 6th or 7th year after planting. Norton's Virginia is the grape vine you can depend on every year. My fruits are all sold in Bloomington at a good price. A good deal of my grapes are sold here, and the balance are made into wine. For Catawba I am offered \$1.50 to \$2 per gallon. Norton's Virginia as high as \$8 per gallon; Grape culture will pay over \$1,000 per acre in Herbemont, Catawba, Rulander, Concord, Delaware, and Norton's Virginia. One good wine grape is worth more to the country than four dozen of table grapes.—*Trans. Ill. Hor. So.*

THE MAGNOLIA IN BLOOM.—Thirty years ago—looking forward, it seems a long time to wait—looking back, it is long that we have waited. Well, thirty years ago, there was a piece of old pasture-ground about a mile north of the village of — city, now — of Newburgh. It was a pleasant enough spot in a cool day—for the cows particularly, if they had a taste for beautiful rural scenery—for its gentle slope toward the river gave a fine view of Newburgh bay and the mountains beyond. But there were no shade trees, and, except its pleasant lookout, it was not an attractive location for a house. Yet here upon this slope Charles Downing made his. Of course, his house was bare of pleasant surroundings. Contrast it then with now. Then he was

not a youth. Now he is not an old man. A little over sixty, but still vigorous—still able to labor every day in the improvement of the six acres around his house, or to enjoy the shade and beauty of trees planted after he had arrived at mature age. Some of these trees are sixty or eighty feet high, with great spreading tops, and poles two feet in diameter. The largest of these trees are the English cork elms. But there is a great variety of sorts, including pines, arbor vitae, spruce, birches, maples, oaks, elms, etc., forming a beautiful shady grove, not dense, but scattered here and there around the house, the barn and outbuildings, and along the drive and on the lawn. The *tout ensemble* indicates taste, comfort, love of the beautiful, and the most perfect accomplishment of the desired object.

But what strikes the mind of the stranger with the greatest force, who is told that the house is less than thirty years old, is that the proprietor should have found such a lovely building spot, fitted by nature all ready to his hand.

How the visitor is astonished when the proprietor, in answer to these remarks about what nature has done for the place, very quietly remarks:

"Nature! Why, sir, this was a barren cow pasture when I came here. I planted every one of these trees with my own hands, and then thought I was pretty well along in years; but you see I have lived to enjoy their beauty, fragrance," and we will add, "your astonishment."

But we have not yet spoken of the greatest beauty of the trees. When we were there, on May 5, 1864, there were two of the handsomest magnolias that we ever saw in full bloom. One of these, the *Magnolia Conspicua*, is thirty feet high, with a large spreading top, covered with snow-white flowers, somewhat like large single roses, and supposed to be from three to four thousand in number. The *magnolia grandiflora*, when seen in its native Southern home, is perhaps more magnificent than this tree; but nothing in our climate could better fulfil the two meanings of the word *Conspicua*—conspicuous and beautiful.

But there is another tree near the one spoken of that to some extent is more beautiful, because the blossoms are variegated in color; a pinkish red intermixed, and shaded with the white. This is the *Magnolia Soulangiana*. It is not quite as large as the *conspicua*, but it is a tree of wonderful beauty and great fragrance. Such a pair of trees in Central Park would be very lightly valued at a thousand dollars apiece. Many a gentleman would freely pay that price to have them in his own garden.—*N. Y. Tribune*.

TROY HILL, PENN.—CATAWBA VINEYARD.—No one who loves a vineyard, and who can appreciate the invigorating effect of an elevated situation, commanding extensive views of interesting objects, scattered over hills and valleys, embracing the noble rivers, extensive forests, and a great city, with its thousand evidences of the busy throng of bustling industry, should fail to visit Troy Hill, in Reserve township, immediately north of Allegheny City, where may be found nearly one hundred acres of vineyards. These are chiefly planted with Catawba vines, set closely and trained to stakes, in the German method.

The thrift of the Teutons, and their untiring industry, is here everywhere displayed. The vineyards are often situated upon the most bold exposures and declivities, where the culture must be performed wholly by human labor. Some of the soil appears to be nearly all stones, and yet the vines are thrifty and productive. The road leading to the ascent is cut in the face of an almost perpendicular cliff, and the wall that supports it seems to spring directly from the vineyards many feet below.

One of the pioneers, an enthusiastic vine planter, is Mr. Adam Reineman, a successful merchant of Pittsburgh, who takes his pleasure and pastime in his vineyard, and in ornamenting the grounds about his comfortable dwelling, where fruits of various kinds abound and thrive. His vineyard, though closely planted, is trimmed and trained with double bows, and is thus able

to set a very large crop. Last year the produce of one acre and a quarter, was 1,554 gallons of wine, made upon a press with only a two-inch screw. Besides this, a second grade of wine was made from the marc, which is mixed with water and allowed to ferment, and then pressed, producing a light, rough wine of inferior quality. A further evidence of what may be done in large yield may be given. Seven vine stocks trained long, on arbor, produced this year twenty-eight gallons of wine—the quality I had not an opportunity of inspecting.

In conclusion, allow me to reiterate the delight that was experienced in visiting these favorite vinelands. The success of others should give us pleasure, even where the contrast with our own less productive vineyards is sadly against us. Let us not despond, however, but try again, and hope for better results in future years, with our renewed efforts to win success.—*Trans. Ill. Hort. So.*

A PRIMEVAL FOREST.—The little town of Ega, on the Upper Amazons, in the heart of South America, originally a mission village of the Jesuits, but now a thriving Brazilian settlement, lies pretty nearly in the centre of the most extensive unbroken forest on the surface of our globe. It requires little effort of imagination, even to those who have not travelled beyond the limits of Europe, to form some general idea of what such a realm of arboreal vegetation must be; lying within a few degrees of the equator, bathed all the year through in an atmosphere like that of a forcing house for plants, drenched by tropical rains and heated by a vertical sun. The total length of this vast forest, from west to east, is 1,260 miles, its breadth varying from 600 to 800 miles. Towards the east, indeed, it continues 700 miles further, terminating only on the shores of the Atlantic. This easterly portion, however, or that which clothes the valley of the lower Amazons, I exclude from the present description, since it is, in one part, much broken and contracted in breadth by large tracts of open grassy land. The

forest of the great plain of the Upper Amazon has sufficient compactness and peculiarity to be treated of as a separate area. But as there is no complete break of continuity, the statement of Humbolt (who had a glimpse of the immeasurable wilderness only from its western commencement, in Peru) still holds good, to the effect that a flock of monkeys might travel amongst the tree tops, were it not for the rivers, for 2,000 miles in a straight line without once touching ground; namely, from the slopes of the Andes to the shores of the Atlantic. At the top of the grassy slope on which the town is built, rises a compact wall of foliage, with a small narrow gap in its midst: the leafy barrier is the frontier line of the forest, kept from encroaching on the few acres of cleared space only by the inhabitants doing constant battle with powers of vegetation, and the gap is the entrance to the only road by land that the townspeople possess. A few minutes' walk under the shady arcade, and the traveler finds himself in the heart of the solitude. The crowns of the tall trees on both sides meet overhead, and admit the rays of the sun only at rare intervals, where some forest monarch has been uprooted by the storm. The path leads to a few small plantations belonging to the poorer inhabitants, and at the distance of about a mile dwindles into a mere hunter's track, which none but a native can follow. Beyond this point all traces of the presence of man cease,—the land untrodden and unowned,—and so it continues for hundreds of miles.—*Good Words.*

CROPS IN THE GREAT SAN JOSE VALLEY.—What of the drought? Let those who hear so much of the drought in the San Jose and Santa Clara valleys, those who fear a famine for man or beast, just go and visit those gardens of our land, and in order to see them truly, go to that grand seminary of learning, the Santa Clara College, go up into the observatory (about 100 feet above the college ground) and take a view of the magnificent landscape from there. A grander scene was never pictured

than an hundred miles circuit around, one grand panorama of beauty.

This view presents no scene of drought or mildew, but one of beauty and fertility—orchards and vineyards, gardens and fields, richer than the mines of Golconda, and wheat in plenty. To a casual observer, the stacks of grain, the mountains of hay, and the vast amount yet spread over the plain, it would seem there was enough hay, and grain, and fruit, and luxuries to supply the whole State. It is one vast sea of plenty. We only wish every speculator would go to this observatory and see what we saw this week—we don't think we are very near a famine.—*California Farmer.*

RURAL REFINEMENTS.—Our people have yet to learn what value there is to a family in a well-kept flower garden. Does it not supply to children their most beautiful memories? A child who has nothing but a dirty house and neglected grounds to recollect, as connected with his early home, lacks an important impulse to a well-ordered life. Beauty in morals can hardly be expected from deformity in condition. And not only to childhood do flowers minister happy influences, but also to the labors and fatigues of manhood and old age. Is not the farmer, who returns from the labors of the field to repose in a well-kept house, in the midst of green lawns and beautiful flowers, a happier and better man for their presence? Does not old age find them an added element of its repose? It were useless to ask, "What good comes of flowers? Can we eat, drink, or wear them? How can I spare the time to cultivate them, when the necessities of life demand so much of my attention?" Just as if ministering to our love of the beautiful is less of a necessity than eating, drinking, or wearing. Virtue and happiness depend as much upon neatness, order and beauty, as animal life upon eating, drinking and sleeping. No class is so unpardonable in neglecting to beautify their homes as the farmers, who live where the means of doing it may be had with so little care and cost.—*Chronicle.*

A NEW BOOK IN PRESS.—A corrected formation will be added. It will be more and new stereotyped enlarged edition of compact and desirable in size and shape "The Field and Garden Vegetables of America," by Fearing Burr, Jr., Esq., is than the first edition, which was not stereotyped. Messrs. J. E. Tilton & Co. will passing through the press. It will contain bring it out in their well-known attractive many more illustrations of the vegetables style. described; and much new and valuable in-

CORRESPONDENCE.

EDITOR HORTICULTURIST:

In the August number of the HORTICULTURIST, G. P. D. asks if he may allow eighteen bunches to mature on his Delaware grape vine, it being its first fruitage.

I have a Delaware vine twice cut back; the third season producing bearing wood for this, the fourth season of its existence. This vine is pruned to the renewal system, and now has eighty well-matured branches of grapes,—not a diseased berry on the vine, but on the contrary they are nearly ripe, many of them being quite eatable at this time. I have several other vines of the same age doing nearly as well. The Delaware is the grape for me *all the time*.

Respectfully, A. FURNAS.
Danville, Ind., 8th mo., 19th, 1864.

EDITOR HORTICULTURIST:

"Is the Adirondac grape hardy?" This question was asked in your June number. Now, considering the high price we have paid for this vine, as well as the character ascribed to its fruit, this is a question of some importance. I will therefore report my experience.

My vine, then a year old, was set out a year ago, started late, but made a growth of about three feet last season. It was cut back in November, and carefully covered with two or three inches of earth. I uncovered it about the middle of April, and had no suspicion that it was injured. *It proved, however, to be winter-killed, root and branch.*

It should be stated that the extraordinary weather of January last was very fatal to vegetable life. Many unprotected Catawba and Isabella vines were killed to the ground, and even the Concord suffered severely. Those which were covered escaped harm.

All of my vines were carefully covered with earth. And it may not be uninteresting to extend this note to the condition of a few other kinds.

Union Village was killed; *Anna* badly injured; *Allen's Hybrid* lost many buds and starts slow; Delaware, Diana, Rebecca, Creveling, Maxatawney and Rogers' Hybrid, all came through unharmed.

GEO. V. N. LOTHROP.

Detroit, June 11, 1864.

MR. EDITOR:

Six years ago I planted for family use, some New Rochelle Blackberry plants, and gave them careful attention, manuring and covering in winter. Up to last season I had no berries worth counting, and none worth eating. They were all sour, few and far between, and gathered through much pain to the fingers from thorns.

As the price of sugar advanced I resolved to give up the Blackberry culture, and gave direction to dig out and burn the plants, as some of my shrewd neighbors had done before me, but other more pressing labors postponed the execution of this order, so that my canes were neither laid down last winter, nor pruned this spring; indeed the last years' canes were not cut out. Judge of my surprise when I found them about the first of August, after the late showers, loaded with fruit of the most luscious kind, large, sweet, delicious and plentiful. I wish to inquire of some of your readers who know, if it takes six years to mature this plant, so as to produce fruit in perfection.

I have no disposition to repeat the order to destroy my plants. Can you inform me where I can get a few hundred of Brinckle's Orange Raspberry? I find none advertised

J. C. W.

THE HORTICULTURIST.

VOL. XIX.....OCTOBER, 1864.....NO. CCXX.

SUMMER RETREATS.

COUNTRY retreats, accessible to our city population, and affording all desirable facilities for renovating our impaired forces, and replenishing the fountains of vitality, both physical and mental, which have been exhausted in the heat of business, and the excitement of metropolitan life, are desiderata which we are beginning to discern and acknowledge. Such public resorts as our fashionable watering-places, our sea-side caravansaries and monster hotels at our mineral springs, have hitherto been the main reliance of our citizens for such means of refreshment, and recuperation. Thither the Summer crowd has pressed, carrying with them, as much as practicable, our city habits; irregular and late hours, unseasonable amusements, extravagance in dress, and intemperance in living; transferring to the country the ways, habits, and indulgences of the city, and neutralising, of course, all the chief benefits which might be derived from the wholesome influences which there abound for such as have the capacity to take them in.

We are by no means disposed to deny the advantages of such a system as this, or unfairly to disparage even this artificial mode

of life. Great benefits will accrue from change of scene and society and from breaking up the wearisome routine of pursuit and habits which business imposes. Dissipation in the country is no worse for health or morals, than dissipation in town, although as the restraints may be less, the temptations may be greater. Yet the pure air of the country will work off the consequent headache, and clear the brain of the pestilent vapors, sooner than the vitiated air of the city. There is likely to be then, from obvious sources, an increase of bodily and intellectual vigor, while there may be an essential rejuvenation. The moral influences which surround these resorts are probably not much worse than those we meet with at the social centres and reputable places of amusement in our cities.

But after all, this is only a tolerable resource for the jaded and weary citizen who feels excited within him the old passion for nature which never completely dies out when once fairly kindled, and who longs for the inspiration of pure air and grand scenery, and physical exercise. He needs something more ample and substantial than these fashionable and crowded resorts supply. He

would like to get nearer the tender bosom and the warm heart of nature, and feel the calm beatings of her pulse, and gaze upon her gentle face and breathe her wholesome breath and feel that he is her child again. And it is a hopeful sign of advancing culture and taste among our countrymen, that we begin to see and feel these needs.

Our merchants, financiers, professional men and scholars have excitements enough at home. Their energies are taxed to their utmost tension in their several employments and competitions; or are worn down by uninterrupted and long-continued application. What they need, then, in the intervals of business, and in the longer Summer vacations which many of them are able to command, are pleasant retreats in the country, agreeable homes to which they can retire, quite apart from the annoyances and distractions of business, and as far removed from the inanities and insolence of fashion, and surrounded by the gentle and soothing charms of nature in her primitive wildness, or heightened by art.

The idea of association, or casual contact with the fashion and frippery of the popular watering-places, of being elbowed in the dining-room, or accosted on the verandah, by the brainless fop, of being crowded into narrow, ill-ventilated quarters by the autocrat of the hotel office, of having his rest broken by the prolonged *hop*, or by the riot and laughter of the *fast* young men in the opposite room,—all this is repugnant enough at any time, and especially now that he would escape annoyances, and give himself up to the pure and simple enjoyments of the country.

And he can readily do this, if he will. Our Atlantic cities are supplied, so to say, with a magnificent back-ground of the most charming natural retreats. Ranges of mountains stretch along, in close enough proximity, to be easily reached by steam communication, and in their bosoms there are lovely valleys, and smiling lakes, and cool streams, and water-falls, and solemn woods, where the man of taste can build his Summer cottage, surround himself with his

family and congenial guests, commune with nature, as with a familiar friend, and gain such repose and refreshment as shall supply him with new vigor and new hope for the coming toil and conflict.

The whole area of New England is netted across with railways which will take the citizen from the sea-board in a few hours into the neighborhood of the most charming scenery which the lover of the picturesque could desire. Her mountains, hills, lakes, forests, and streams cannot be surpassed in beauty by any other region of the world, old or new. Few people have any just idea of the abounding wealth of capability in all that is grand, beautiful, and health-giving, which is to-day lying waste and neglected among the New England hills, along her lakes and streams. Glance at her map. See how the State of Maine, large enough for a kingdom, is dotted all over with magnificent lakes, and intersected by romantic streams. It would require but a small investment for the city merchant or banker, to make him lord of the soil of two or three hundred acres of land and water and forest. Leave it much as nature gives it to your hand. Open your roads and prepare for the necessary tillage. Build your lodge—not a rude, backwoods cabin, but a convenient country house, without pretensions, but with ample room for generous hospitality, and in good taste, that it may serve as a model to your less cultivated neighbors. Spend your Summers there. You will find ample employment for your time in thinning out your forests, and in the use of your gun and fishing rod, while your newspaper and your choice books will furnish food for thought. And so you will not only add length to your years, but you will make your manhood more complete, your sympathies more comprehensive, and your whole character and life more true, more worthy and gracious.

A new region is just opening to the citizens of New York by the construction of a railway northward from Saratoga, into the very heart of the Adirondac country. This region is so very little known to peo-

ple generally that to many it seems a little better than a myth, about which very suspicious *fish stories* are wont to be told. We shall be excused, therefore, we presume, for helping the reader to a few detached facts concerning this interesting country. It lies then, west of Lake Champlain and north of Saratoga and Fulton counties, and embraces the head waters of the Hudson within its territory. It derives its name from the range of mountains which stretch from Lake Champlain south-westwardly to Herkimer County. In this range there are six peaks which exceed four thousand feet in height, Mount Marcy, the highest of them, being 5,467 feet, or nearly four times the height of the loftiest peak in the Highlands on the Hudson. These mountains abound in iron ore, and we have just seen the statement that the famous iron mountains of Missouri cannot equal these mines for quality and ease of working. The mountain scenery of this region is grand and majestic, not surpassed by any region of its size on the continent, and perhaps rarely equalled any where in the world.

A not less interesting and picturesque feature in the Adirondacs is its wonderful net work of lakes, varying in size, and none of them large—which covers the region and imparts to it a surpassing beauty. These lakes are supplied from pure, cold springs, and are generally connected by water threads, so that it is practicable to pass in a fishing boat, from one to another. It is needless to say that they are the *habitat* of the speckled trout, that most delicious of all the finny tribe, while the forests abound in game of various kinds, making the Adirondacs a very El Dorado for the sportsman, while it is the Switzerland of the lover of the grand and picturesque.

This region, then, will be brought within our reach, in the course of the coming year, perhaps, by means of the railway now in process of construction. It offers sites for Summer resorts to our wealthy citizens which are altogether unequalled. The variety of its scenery, from the grand old mountain, whose top pierces the low-driven

clouds, at an elevation of five thousand five hundred feet, to the placid lake which sleeps at its foot, overshadowed by the green forest, and mirroring back, in faithful outline, mountain and trees; the bold precipice, the dark ravine, the laughing water-fall, and the brook that goes babbling on its way; the shadows of the kingly peaks, the light upon the distant hills, the glory of the opening morn, and the setting sun; the variety and beauty of the trees, and especially the dark rich tone of the evergreens, all combine to make this region one of wonderful beauty and interest.

The Adirondacs stand as a barrier between us and the Arctic colds which otherwise have nothing to break their force, as they sweep down from the coasts of Labrador. Their wooded hills and mountains gather the snows and rains in their season, and give them out in weeping springs and slender rivulets, which are joined by others as they go, until they swell into the majestic Hudson which pours its willing tribute into the Atlantic. When the railway is completed, twenty hours by the river and its iron tributaries, may take the New York citizen to its very sources, away from the traffic and turmoil of the town, to the most delightful Summer retreat which wealth and taste can command.

It is not probable that the essential character of the Adirondac scenery will be changed by the progress of its mining works or by opening its beauties to Summer residents from the cities. No large portions of the region are susceptible of high culture. The mountains and hills and ravines and rocks will remain, and the features they present will be the prevailing features of the scenery through all time. The old forests will stand, the growth keeping even pace with the removal, and nature in all its wild luxuriance and beauty, will still dominate over the Adirondacs, as when the "Deerslayer" stalked his game in their fastnesses.

The Adirondacs ought to be the great "Central Park" of the whole State of New York. Easy of access from the main points

and lines of travel, as it soon will be, its choice sites should be taken possession of, roads laid out, means taken for the effectual preservation of fish and game, and forests,

and under the liberal fostering of wealth and taste it would have, in a few years, no possible rival on the face of the earth, as a place for Summer Retreats.

A LOW-PRICED COLD GRAPERY.

BY GEO. E. & F. W. WOODWARD, ARCHITECTS AND HORTICULTURISTS, 37 PARK ROW, N. Y.

WE give an illustration this month of a house designed for a Cold Grapery, of a lower cost than those heretofore given. The object has been to erect a house that should

answer the purpose intended, and be a complete working house in all its parts, without unnecessary expense. The general outside appearance, *Fig. 1*, is similar to other

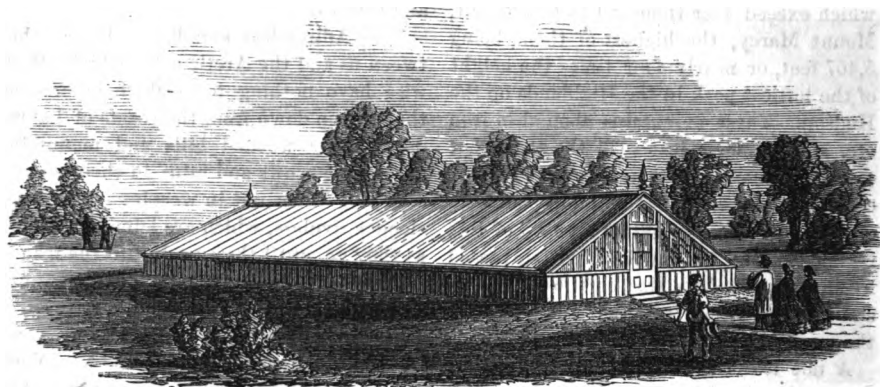


Fig. 1.—Perspective.

houses heretofore illustrated, the straight roof affording little opportunity for architectural variety. By referring to *Fig. 2*, section, and *Fig. 3*, ground plan, it will be observed that rafters to support the roof are dispensed with, except two at each end

to form the verge and finish. The ridge and purlins are supported by light 2x3 in. posts, which rest upon larger posts beneath the ground. This is a considerable saving, both in material and workmanship. Posts set three feet into the ground form the

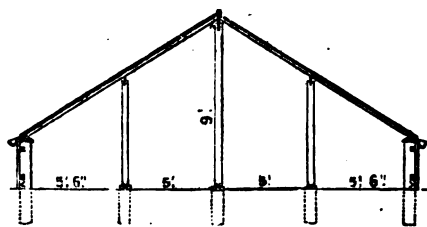


Fig. 2.—Section.

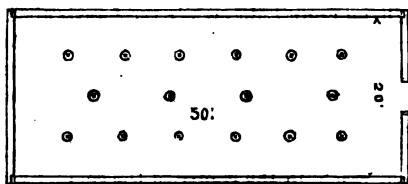


Fig. 3.—Ground Plan.

whole foundation. The sides of the house are two feet above the ground, and the entire structure is but ten feet in height, enabling the gardener to reach nearly every part of the roof from the ground. The

posts may appear to be an objection, but in practice they are found, not only to be not in the way, but are useful to train the vines upon. Five rows of vines are planted, two in the usual manner at the sides, and one

row along each line of posts. These centre vines will give several crops of good fruit before they will be much interfered with by those trained upon the roof. 9x15 glass was used in glazing, to lessen the expense of sash bars, the glass being laid the 15-inch way. This glass, being very true, has made a good roof, but 10x12 is as large a size as will usually be found to answer. This house is distinguished from most others that we have built, by the greater amount of light admitted, owing to the absence of rafters and the less than usual number of sash bars. The sides and ends are boarded perpendicularly, and battened. Ventilators are provided on each side of the ridge and over the doors, while the sashes hung in the doors furnish sufficient bottom ventilation. It was desirable to have the

house raised or appear higher owing to the nearly level nature of the ground, and for this reason the border was all made above the surface two feet and a half in height, composed largely of decayed soda, with an addition of muck, coal and wood ashes and a small quantity of stable manure. It has been found to work admirably, and preserve an even moisture throughout. At present the inside border is alone completed, as it was desirable to plant the vines the present season, and sufficient materials were not at hand to complete the whole. Vines were planted the 1st of June, and are now making rapid progress. The cost of a house of the above description in these times need not exceed \$15 to \$18 per running foot of length.

THE CENTRAL PARK.

THE SEVENTH ANNUAL REPORT of the Board of Commissioners of the Central Park has been before the public for several weeks. Many of our readers, however, are not likely to see it, and yet they would be much interested in many of its facts and details, as furnishing indices of our improving taste and culture in what concerns the highest interests and relations of Rural Art, and we propose, therefore, in a brief way, to present to them a *résumé* of the report in its most prominent and interesting statements.

As we stated in our August number, the Central Park covers an area of eight hundred and forty-three acres, extending from Fifty-ninth to One Hundred and Tenth Street, and from the Fifth to the Eighth Avenue. It thus forms a regular parallelogram, its length being about five times its breadth. This regularity of exterior form is not favorable, of course, to the highest landscape effects, and it imposed upon those to whom was entrusted the task of laying out and construction, many difficult problems. The variety of surface, however, and of natural elevation, varying from the

tide level at one point, to an elevation of one hundred and thirty-six feet above tide, and the artistic skill employed in covering these defects of outline by the adoption of graceful curves and diversity in grades, and by judicious planting, satisfactorily solved these problems, and obviated these difficulties.

In a narrow, utilitarian point of view, it may seem that the appropriation of so large a space to a public park, and its alienation from business purposes, in a commercial city like New York, is almost a waste of good land and "corner lots." But let us look abroad and see what is done in foreign cities for the benefit of the people. London has more than *six thousand acres* within its limits, and in the accessible suburbs, open to the enjoyment of its population—*six thousand acres*, too, composed of the grandest and most lovely park scenery, or of luxuriant gardens filled with rare plants, hot-houses and hardy shrubs and trees. Paris has its Garden of the Tuileries in the heart of the city, whose cool groves stretch out to the Elysian Fields. On the outskirts of the city are Versailles, with its

three thousand acres of imperial groves and gardens, and Fontainebleau and St. Cloud, with all the rural, scenic and architectural beauty that opulence and taste could create—all open to the people of Paris. Vienna has its great *Prater*, and Munich its superb pleasure ground of five hundred acres. Even the smaller towns all over Europe are provided with their public grounds, much more extensive, compared with their population, than our Central Park.

We observe, in the Report, an admirable suggestion which we hope will be carried out. The Commissioners say, "If an original suggestion of the Board is carried into effect for improving the Seventh Avenue, by widening it to a width of one hundred and fifty feet, from the northern boundary of the Park to the Harlem River, near McComb's Dam, and planting the whole line with rows of fine shade-trees (this improvement having been authorized by the Legislature in 1859, on the consent of a majority of the owners of the property on the Avenue), it will become not only a main avenue of travel from Westchester County to the city, but will form a general resort for pleasure driving, as well as an important and attractive link in the route from the Battery, through Broadway and Fifth Avenue, to the Park, through the Park to its northerly gate, thence through Seventh Avenue to the Harlem River, thence by a most picturesque route along the southerly and westerly side of the Harlem River, *via* Kingsbridge road to the Spuyten Duyvel. Such a route would give a most agreeable mode of reaching the adjacent country, and form a drive on the Island unequalled in extent and interest."

There is another aspect of the Park question which our utilitarian citizen will be disposed to regard, and that is the enormous cost of this pretty pleasure-ground for the people.

It appears from the Report that the total cost of the land was \$4,815,671, and that there had been expended, on account of construction, up to January of this year, the additional sum of \$3,915,546, making a

grand total of \$8,731,217. The annual appropriation for the maintenance of the Park, independent of the construction account, is not to exceed one hundred and fifty thousand dollars. The interest on this grand total of cost amounts to the considerable sum of \$519,886 per annum. On the other hand, the increase in the value of the property contiguous to the Park has kept pace with these expenditures. The assessed value of the three Wards surrounding the Park was, in 1856, \$26,429,565. In 1863 it was \$51,419,499. The increased tax on this increased valuation was \$508,545—wanting less than twelve thousand dollars of being equal to the total interest on the cost of land and improvements.

And for whose benefit is this outlay made? It appears from the Report again, that during the year 1863, the number of visitors at the Park was 4,327,409—that of these about one million and a half came on foot, ninety thousand on horseback, and the remainder in vehicles of various sorts. They traversed freely, and without unnecessary restrictions, the eight miles of the finest carriage ways on the continent, the six and a half miles of completed bridle roads, and the twenty-one miles of winding and beautiful walks, and so perfect is the order, and so efficient the police system of the Park, and so well conducted the crowds who frequent it, that the whole number of arrests during the year, for violation of the regulations, was only eighty-six, forty-eight of which were for driving or riding at a pace which exceeded the rules—a propensity of Young America to be, or to seem, *fast*.

The Park is the general resort of the citizens of all classes and all ages, as well as of strangers who come to the metropolis from all parts of the country and of the world. The largest number of pedestrians that entered the Park on any one day in 1863 was 94,076. The largest number of equestrians on any one day was 1,542, and the largest number of vehicles on any one day was 9,463. The Report says—"In one day, in 1863, there were upon the Park 9,463 vehicles and 503 horsemen—so large

a number that, if they were to start from the Battery in close order, one after the other, without delay, the head vehicle would have passed to Kingsbridge and returned again to the Battery before the last carriage had commenced the journey. Of this number, 3,832 vehicles were there between the hours of 5 and 6 P. M., sufficient, if placed closely one after another, to form a double line extending over the whole finished drive of the Park, eight miles in extent. This is, of course, an extreme instance."

Of course it is, and yet it shows the wonderful popularity of the Central Park to all sorts and conditions of our population, to the wealthy and exclusive class, who use its magnificent drives, and to the poorer artisan or laborer, who takes his wife and children and spends his leisure hours in wandering through the lovely Ramble, enjoying the refreshment of its cool shades. It is no exaggeration to say, as the Commissioners have well said, "that this work is doing much towards elevating the general public taste of the country, not only in the more extended and spacious public and private dwellings and gardens, but in the adornment of the more numerous and less pretentious habitations of our rural population."

There are several other topics embraced in or suggested by the Report on which we may, perhaps, have something to say in a future number, but for which we cannot now spare time and space. Among these subjects are a grand Conservatory, such as was contemplated opposite Seventy-fourth Street, near Fifth Avenue—a Hall of Art,

Zoological collections, and a Botanical Garden, and the mention of this last reminds us that our thanks are due and are hereby proffered to the Commissioners for appending to their Report a very valuable catalogue of the Trees, Shrubs and Herbaceous Plants now growing in the Park. It should be carefully preserved by those who receive the Report.

We shall close this paper with a brief reference to the delightful and popular arrangement of the Commissioners in furnishing music for the visitors at the Park on the Saturday afternoons, when the season permits its enjoyment. Such music as is adapted for performance in the open air, from the repertoires of the best native and foreign composers, interspersed with national and other popular airs, not only affords gratification and enjoyment, but will contribute essentially to educate and elevate the popular taste. "Few landscapes," says the Report, "present more attractive features than that of the Park on a music day. Thousands of brilliant equipages throng the drives. The waters of the Lake are studded with gaily-colored pleasure-boats, appearing now and then in striking contrast with the green foliage that fringes its banks; the water-fowl float proudly over its surface; children play on the lawns; throngs of visitors from divers climes move among the trees, whose leaves, fanned by the soft lays of the music, wave silent approval; all seems full of life and enjoyment, and as some familiar strain breathes a sweet influence around, the whole appears like some enchanted scene."

THE USE OF ORNAMENTS IN LANDSCAPE GARDENING.—No. II.

From the title of this article it might be inferred that we meant to include living as well as inanimate ornaments, trees, shrubs, plants, and flowers, equally with *Architectural Ornaments*. We might with perfect fairness and propriety do so, but as the subject would then become more extended than we designed, our wish is rather to confine

attention to the term last employed, and to treat the subject under that head—viz: *Architectural Ornaments*. The proper use of these depends altogether on the character of the place. In the great hereditary estates of England we find this kind of ornamentation carried out with a very lavish hand, and the structures built in that

durable and permanent manner characteristic of such estates, where one generation carries on the work of the preceding: but in a country like our own, where the largest and finest estates change hands more than once during the life-time of the first proprietor, such ornaments are seldom found;

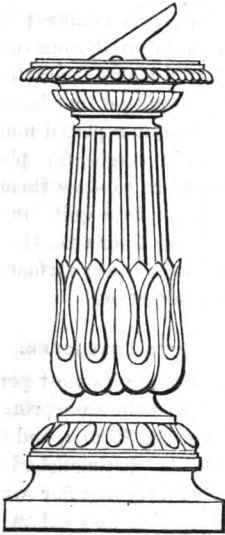


it is not so much a question of whether they will add to the beauty and enjoyment of the property, but whether they will add to its market value—whether the place will sell for more. Hence it is that Architectural Ornaments are generally of an inexpensive kind, and are intended only to serve the time of the proprietor. In the use of Architectural subjects, the first points to be considered as we have already hinted, are, the character of the grounds, their extent and the fitness of the proposed objects. Are the grounds of narrow compass and of level character, where the eye goes over a large part at a glance, then care is to be taken, not to make these structures too numerous; in fact, for such grounds a single object of the kind for the eye to rest on, is sufficient. It should have a design, be suggestive in itself; but if the eye rests on more than one such object at a time, design and suggestion are out of the question. The kind of structure should also be adapted to the character of the grounds, if, as suggested, the grounds be level and highly finished,

and the proposed structure be near the mansion, then it should correspond with, and be finished in the same style as the mansion: a piece of rustic work would here be out of place, and not only lose all its beauty of character but actually mar the scene. If on the other hand, the character of the ground be varied, such as, an undulating surface, alternating high cultivation with rough nature, then there is a field for greater variety and frequency of use: wild ground and irregular surfaces call for rude and bold work; here introduce rustic bridges crossing ravines, rustic seats, vases, baskets of rustic work, gnarled and curious roots encircling boxes of plants, hollow stumps and dead trees supporting climbing plants, rustic kiosks on spots which offer agreeable resting places and command fine views; all such objects are appropriate to grounds so characterized. There is no particular beauty in a piece of rustic work in itself, but when properly placed it becomes beautiful from its association, and in turn enhances the picturesque of the grounds about.

In finished grounds a higher grade of ornament only is in place. Vases of stone, artificial or real may be employed with fine effect, as also, statuary; but if these be employed in the pleasure grounds, care must be taken not only to place them properly, but not to overdo the work with too frequent repetition. Vases of stone and statuary being suggestive of long duration and of a ponderous nature, should be treated as such, and proper places prepared for them to rest in: that is to say, they should not be set down in the grass as if they had been temporarily left there while on their way to their intended place, but should be securely posed on pedestals of stone—such objects are usually connected with some kind of building, as for instance a terrace wall, or where they can be placed on a pavement: still it is not unusual to employ them by themselves in isolated spots. Where this is done, the pedestal or base of the ornament should be entirely disconnected with the grass, either by stone flagging, or by what perhaps gives a better effect,

clearing away the grass and surrounding the base with a border of gravel.



Among the many objects used for adornment there is a very pretty one which

we would like to see more frequently employed, and which when properly placed by the side of some walk well retired from other objects is in itself highly suggestive—we refer to the *Sun Dial*. What thoughts this monitor suggests to the mind! how silent, yet how eloquent! his must be a vacant mind indeed who can pass such a teacher without finding thought to accompany his walk. A shadow teacheth us, and we learn in the end that we have pursued but shadows.

In the beautiful words of the poet:

“This shadow on the dial’s face,
That steals from day to day,
With slow, unseen, unceasing pace,
Moments, and months, and years away;
This shadow, which in every clime,
Since light and motion first began,
Hath held its course sublime—
What is it? Mortal man!
It is the scythe of time:—
A shadow only to the eye;
Yet in its calm career
It levels all beneath the sky;
And still, through each succeeding year
Right onward with resistless power,
Its stroke shall darken every hour,
Till nature’s race be run,
And time’s last shadow shall eclipse the sun.”

THE CARNATION,—ITS HISTORY AND CHARACTER.

BY AN AMATEUR FLORIST.

I. ITS HISTORY.

I TRUST you are an admirer of my favorite flower, the CARNATION. Not because you are bound, *by virtue of office*, to patronize all Flora’s favorites, but that it is really and *per se* worthy of universal admiration.—What, indeed, is more beautiful or more fragrant than a collection of the finest varieties, comprising all gay and beautiful hues, and all the odorous richness that belongs to the spice groves of the East.

Dianthus signifies, literally, *Jove’s Flower*, or the *Divine Flower*. This name, bestowed on the genus to which the Carnation belongs, may be taken as a proof of the favor in which it was held a long time ago. How the popular name *Carnation* came to be bestowed, the floral historiographers have not told us. Perhaps it was given in allusion to the peculiar flesh-colored hue of some of

the plainer sorts—likely enough to have been the first kinds known—*caro*, *carnis*, being the Latin term for flesh. Indeed, Steevens says that so long ago as before the time of Shakespeare, *Carnardine* was the familiar name of the flower. I find it thus used in an old play of that era:—

“Grogams, satins, velvet fine,
The rosy coloured *carnardine*,”

Drayton, the poet, indeed, also gives me warrant for this interpretation:—

“The brave *carnation*, then with sweet and sovereign power,
So of his colour called, although a July flower.”

I like to look into the primitive history of my garden favorites. It is more agreeable than searching genealogical trees and tables of ancestry; for the flowers go on improving every generation, while the descendants of great men often grow “small by degrees, and beautifully less.”

The English and the Dutch have always had quite an enthusiastic passion for my favorite flower. You remember, no doubt, what that most delightful old essayist, the Spectator, thinks it necessary to say:—

"Some professed florists make them their constant study and employment, and despise all fruit; and now and then a few fanciful people spend all their time in the cultivation of a single tulip or a carnation."

I am afraid this last sentence conveys an idea of a devotion far greater than even my own.

The Carnation has been the favorite, however, of more celebrated personages than the "professed florists." The illustrious Condé, great as a general and as a prince, while he was a state prisoner in the gloomy Bastille, amused himself in cultivating this charming plant. Indeed, a French poetess, Mademoiselle de Scudéri, has commemorated the fact in one of her verses:—

"En voyant ces Oeillets, qu'un illustre guerrier
Cultive d'une main qui gagna des batailles,
Souviens-toi qu'Apollon a bâti des murailles,
Et ne t'étonne plus que Mars soit jardinier."

The Carnation is said to be a native of middle Europe. It is quite doubtful if the ancients knew it at all, as there is no allusion to it in any of the classics. But it has been, for a great length of time, a favorite with all Germany and the north of Europe.

That good old botanist and herbalist, Gerarde, first introduced it into England in 1597. He quaintly tells that in his time it was in great esteem "to deck up the bosoms of the beautiful, and to make garlands and crowns for pleasure."

Since Gerarde's day, the Anglo-Saxons have by no means neglected the Carnation. Within the last fifty years, some of the leading English flower fanciers have enumerated 300 or 400 sorts in their catalogues. The perfection to which their culture is carried quite astonishes one. Indeed they are most tenderly nursed. They are always kept in pots full of the most carefully ordered composts; they are closely watched at all times, but especially when approach-

ing the blooming season. Then the buds are thinned out as soon as they are well formed; the flower-stems are supported by neat and slender green stakes; the opening blossoms are prevented from turning awry by pieces of card placed beneath them; and at length, the expected time having arrived, the whole collection is placed under a tasteful awning upon stages, the plants rising one above another, to show them all to the best advantage. It is quite impossible to imagine anything finer than the "gay confusion" that meets the eye when such a display is in its perfection.

II. ITS CHARACTER.

THE Carnation, in its most perfect state, is known to florists in three principal forms, viz., the *Flake*, the *Bizarre*, and the *Picotte*.

The *Flake* is distinguished by being striped, with pretty regular well marked bands or stripes of two colors only on a white ground.

The *Bizarre* (from the French *bizarre*, odd, irregular) is characterized by having irregular stripes of three colors on a plain ground.

The *Picotte* (from the French *piquette*, pricked or spotted) differs entirely from the foregoing. They are usually bordered with a narrow margin of some dark color, or are dotted with a great number of minute spots. The flowers are usually smaller, and the plants much hardier than the *Flakes* and *Bizarres*. The edges of the flowers in *Picotées* are generally serrated or cut, though in the finest specimens they are often nearly even. This class affords the greatest variety of color, both in the ground and the spots or pencillings—yellow, purple, lilac, white, crimson, &c.

The fine points in a carnation are these. The flower-stem must be strong and erect, the calyx must open regularly and without bursting, and the petals must be symmetrically disposed.

In *Flakes* and *Bizarres*, the petals must be large, rounded on the edges, and regularly disposed. The ground color must be

clear and pure. The stripes must be distinct and well defined. In Picotées, the margin color should be narrow and well defined; the pencilling or dotting should ra-

diate from this to the centre, and should be clear and distinct.

[TO BE CONTINUED.]

PRUNING TREES AND PLANTS.

BY C. N. BEMENT.

It has always been our opinion that every person, whatever be his occupation, should be communicative to others on subjects calculated to promote the good of others. Under such impressions we submit the following.

It may be supposed that there are few who are not aware of the utility of keeping trees and plants in a healthy and vigorous state, which chiefly depends on *pruning* and giving proper nutriment, and by little inquiry it will be found that many of the present fine variety of flowers now cultivated are nothing more than the premature parts of the vegetable kingdom *improved* by culture. So various is the opinion of many practical horticulturists on the *time* and *mode* of pruning, that we shall not venture to give directions, but merely suggest a few observations that have come under our immediate attention.

First. By general observation on fruits we have found that all varieties, whatever may be their natural *location*, require a free circulation of *air*, and most generally of *sun*; and that fruits which are partially excluded from these elements, by foliage, &c., as the cucumber, melon, strawberry, grape, &c., the part excluded is destitute of its color and flavor, in proportion to its exclusion.

Second. That when trees are too thick of wood, the most weakly part dies, and such part oftentimes is the means of breeding and harboring *insects*, which may be considered as winter quarters or nursery for them.

Third. That trees and plants have their natural *port* or habit, which is oftentimes much injured by being pruned in such a manner as to alter their form.

As regards the quality of fruit, *pruning* appears to be essentially necessary both to the grower and consumer; the former being benefited by a larger portion of well-matured fruit, and the latter having the satisfaction of eating of a more wholesome fruit than those of an unmaturing nature. Prudence forbids us at this place to venture an opinion on the ill effects that may arise from fruits that are not properly or perfectly ripened, which we have reason to suppose are of a fermenting quality, being less replete of their saccharine and aromatic quality.

Wherever any ill effects or disease arises in large cities, where trees, vines, etc., are suffered to grow into dense clusters, and their branches and leaves putrify and decay, we shall not attempt to assert! But certain it is that such places always abound with insects injurious to trees and plants, which seem to indicate some propriety of a removal of such nuisance. Taking suffocation into consideration, which is caused by a deprivation of the sun and air, many interesting demonstrations may be made, as it will be seen that one part of the tree suffocates another, without having any material effect on the whole system; another part is partially injured, as the middle of thick trees, in such a manner as to be fruitless; whilst the parts wholly exposed to sun and air, the fruit and branch are found to be replete with all their natural qualities. It may also be remarked that leaves of plants lose their natural color by the absence of light, in which case they most generally change into white, which are often cherished as varieties by the inexperienced horticulturist, as the geraniums, etc. This is sometimes caused by the plants

being overcharged with water, but in either case is nothing more than disease, which is of short duration.

In the operation of pruning, the principal object to be kept in view appears to be in thinning and regulating in such a manner as every part of the plant or tree may enjoy sun and air, and that the tree is of a single stem, forming a regular head from a common centre at any given height, from which the leading branches should be kept as regular and as near of equal dimensions as possible, in order that each branch acquire an equal quantum of sap, etc., from the common centre.

It will far exceed our prescribed limits to enter into the many modes and forms of

pruning and training in this place, some being trained in form of a *fan*, others horizontally, and some pendulous to walls, fences, espaliers, etc., which require the assistance of nature, viz, sun and air, and most generally are inclined to detach themselves from the places designated for them in quest of their natural elements. Much appears to depend on the management of fruit in their infant state, in their being nurseried in a proper manner, of which the seed appears to be the most proper; and it is little to be doubted but the present enlightened state of Horticulture will ensure the planter healthy trees from any section of the Union.

Po'keepsie, July, 1864.

THE DELAWARE GRAPE.

BY C. J. MAY, WARSAW, ILL.

WILL you give me permission through your columns to say a word for the Delaware Grape?

I have always until this year thought it a slow grower. I have never heard it called a rapid grower, and believe it is not generally thought to be such. It is also thought to be longer in coming into bearing than the Catawba or most other grapes; but let me give it its just due, at least, in this situation.

A word about the situation. The Vineyards around this place,—of which there are many—containing in all, near, if not quite, two hundred thousand vines, (most of them Catawba) are planted on the bluffs back of the Mississippi River, some near the river, and others three and four miles from it. The soil on many of the hills clay, on others sandy loam. That of my vineyard on a high hill directly above the river is a dark sandy loam, with a depth of two to two and a-half feet; under that a subsoil of clear sand, and below that a fine gravel. A few hundred yards east, clay predominates over the sand. One of my friends has a vineyard about one mile from the river, where, *he says*, red clay predominates in the

soil. The vineyards here are all young, have never borne fruit, with the exception of three small ones. The wine (Catawba) that has been made from these vines is, by good judges, pronounced far superior to that made at Nauvoo, (sixteen miles north) or Cincinnati; and the yield per acre one-third more than at the latter place. Last Winter the vines not covered were killed to the ground, consequently there will be but little wine made this year. But now about the Delaware. In the Spring of 1863 I procured one hundred and fifty Delaware vines, fifty Concord, and twenty-five Herbemont. I planted these vines in the centre of my young Catawba vineyard of three thousand vines, which were planted at the same time. These Delaware vines were very small; no better than are usually sold for No. 3. They were given no extra care, but treated like the others in every respect. None of the vines made much growth as it was a very dry season with us, but the Delawares in the Fall were larger than the other varieties. Though I think the ConCORDS and HERBEMONTS were the best plants when planted. They were all trimmed in the Fall and covered with earth. This year

they have grown beyond all expectation. Many of them have grown two canes to the height of twelve feet—none have less than two canes, and none have made a growth of less than six feet. The canes are not long pointed, spindling things, but short pointed heavy wood, larger and finer canes every way than those of the Catawba; while the Concord has made an equal (no greater) length of cane. They are long pointed, small—not half the size of the Delaware. Mr. Worthen has on his vineyard, three miles south of mine, some of the same poor plants bought and planted at the same time mine were that have made a growth this year of sixteen feet, many of them have three canes; they were treated to liquid manure during the dry weather of last Summer.

But I have told you what poor plants of the Delaware have done in my vineyard without stimulant of any kind; in fact there has never been one particle of manure put on the land. I expect and shall have, near a full crop of grapes from the vines next year. Now I will tell you what Delaware vines planted this year have done. I have planted some seven hundred No. 1. Delaware vines on a terraced hill, exposure south-east, which have made from four to five feet growth, single cane, and are now growing faster than ever. I think they will make ten feet this season, and that too without stimulants of any kind, while the No. 3 Delaware have not made on an average ten inches, with rather better care than the No. 1 have received. My

friend, Mr. Coster, has a vineyard of five hundred No. 1 Delaware vines, planted this year, that have made a growth fully equal, if not superior, to mine, and he, like me, has not lost one. This vineyard joins mine on the south. We have full confidence in the Delaware, feeling certain it will come into bearing one year before the Catawba; and we know it to be a rapid grower. And more than all we have good evidence that it will stand our coldest Winters unprotected without injury. Vines standing by the side of the Catawba, both unprotected, did not have their first buds injured in the least last Winter, and are now bearing a full crop, while the Catawba were killed to the ground. Whether this is a more favorable location for the Delaware than any other I do not know; but am certain our experience has been more favorable to the vine, and more satisfactory to ourselves than we were led to expect, judging from that of others in other locations.

Should you think it possible I have stretched the truth, I can bring many to vouch for what I have written. None of us here have any knives to grind. There has never been two hundred Delawares propagated in this vicinity, consequently we have none to sell, but many to buy.

Should you think this article worthy of publication, give it a place in the *HORTICULTURIST*, for the Delaware *deserves* all the praise that can be given it. It is here with us, the King of American Grapes.

WARSAW, ILL., July 19, 1864.

RENEWING THE TOPS OF LARGE TREES BY GRAFTING.

BY H. W. F.

In many of the older settled parts of the country, are to be found numerous large trees of the Apple and Pear, planted by the roadside and along the division fences. These trees are many of them still in a healthy and vigorous condition, but produce inferior and in many cases a worthless description of fruit, unsaleable in market, fit only to form food for cattle and hogs upon

the farm where they are produced. These trees are generally seedlings or suckers, planted by the old settlers in the hope that they might produce good fruit, or with the intention of grafting them after they had attained considerable size. They have been, however, neglected with few exceptions, and still bear their original fruit. Those that were grafted, were done with

varieties that have now been superseded by newer and better ones. The heads of these large trees may with little labor be changed, made to produce superior fruit, and yield a handsome and easily earned addition to the income of their owners. How shall all this be brought about in the most proper manner, is the point to be reached. Many of the books on fruit culture recommend that the grafting be commenced on the upper branches: that one-third of the top only be operated upon at a time: the succeeding year another third lower down, and the third year the grafting to be completed on the lower limbs. This is very well if we care not to preserve beauty of proportion in our tree. The advice as to extending the time of the operation over three years is sound, for if the grafting were completed in one season, the scion would furnish but a comparatively small amount of leaves to elaborate the sap, the tree would be greatly enfeebled, and in many cases, as completely killed, as if cut off at the ground.

If the experience of the writer is the experience of others, we should reverse the order of things and begin upon the lower branches. Grafts inserted at the top of a tree grew vigorously, those put in the next season less so, while on the lower branches

they are exceedingly weak, for the reason that all the vigor is thrown to the top by the violent successive prunings the tree has been subjected to. The lower branches ought to be the strongest in a well balanced tree, and the opposite is the case if we proceed in the first manner. If the lower branches are commenced upon we have a moderate growth from them, at the second pruning these first grafted limbs receive a larger supply of sap and grow with more vigor, while those at the top being operated upon last, the limbs below have had the advantage of one and two years growth, and will always preserve their relative proportion of strength, thus the tree will be more or less symmetrical with the habit of the variety employed. It is better in grafting, to avoid cutting off limbs more than an inch and a-half in diameter, better insert a large number of scions, and quickly renew the branches, than to reduce the tree to a few large stumps, which take many seasons to heal over, and in the meantime are decaying and shortening the life of the tree. Why may not every farmer raise his Bartletts and Baldwins, instead of contenting himself with fruits that have been discarded as worthless by intelligent cultivators long since.

THE GARDEN—ITS PLEASURES AND PROFITS.

BY C. N. BEMENT.

It is admitted, we believe, that among the various pursuits which occupy the attention of man at the present day, few are more distinguished than Horticulture. Even in the primeval ages of the world, before luxury had established its control, every relation in human life and the wants and necessities of man, were confined to the immediate productions of his native soil, we even then find that the garden was one of the primary objects of his industry, and an important source on which he depended for subsistence. Now, if the culture of the garden, as a means of subsistence, be one of the first arts attempted by

man on emerging from barbarism, so is the flower, or at least the landscape garden as an art of design, one of the last inventions for the display of wealth and taste in periods of luxury and refinement.

The enjoyment of a garden is in truth so congenial to our ideas of happiness, as to be desired by all men of all ranks and professions. Those who toil hard in the pursuit of gain, amid the dust and turmoil of cities, commonly solace themselves by hoping with the poet Cowley, "One day to retire to a small house and a large garden." The care of a garden is a source of agreeable domestic recreation, especially to the fe-

male sex, whose sensibilities are keenly alive to the placid beauty of the objects it presents to the eye, and the air of retirement, tranquility and repose which settles on such a scene, is favorable to contemplations full of tenderness and hope. "Our first, most endearing and sacred associations," Mrs. Hofland observes, "are connected with gardens; our most simple and most refined perceptions of beauty are combined with them, and the very condition of our being, compels us to the cares, and rewards us with the pleasures attached to them."

To the valetudinarian, the garden is a source of health, and to the aged, a source of interest; for it has been remarked of a taste for gardening, that, unlike other tastes, it remains with us to the very close of life. Where this has been duly nurtured and suffered to produce its best effects, the grace of a refined and practical knowledge will prove an ample recompense for the loss of the livelier energies of youth; and one glimpse of nature will repay the mind for the failure of its early visions and the destruction of the airy architecture of romance. What a redeeming and at the same time beautiful touch of natural feeling may be discerned in Mistress Quickly's description of the death of the inimitable philosopher, Falstaff, of whom, when all the glories of unequalled wit and the raptures of a riotous sensuality were exhausted, we are told the white-headed veteran of the world, even in the last moments of his life, "played with flowers," and "babbled of green fields."

In most parts of Europe the garden is not only a common appendage of the farm but even of the humble cottage; and while these little improvements reflect great economy of labor in furnishing human subsistence, their floral decorations excite peculiar interest and admiration in the traveller, and are the theme of high commendation.

The inhabitants of Holland, proverbially industrious, have indeed almost made their country a garden; and to the application of irrigation, above all other causes, they owe

that great abundance which is the almost invariable reward of great assiduity. The Hollanders have brought their industry to their adopted land, but they have left much of their skill at home.

In Britain, the attention of the people is, by the peculiarity of the general policy of that nation, much diverted from the cultivation of the soil, yet agriculture has not been much neglected there, and so far as attended to, it has been honorable to the nation. Industry has been greatly aided by the application of scientific principles. In the application of these principles to horticulture, the Englishman has in very many instances approached a perfection worthy of imitation, and still more of the rivalry of the American.

We are told by our countrymen who have visited Europe that, in England especially, the humblest cottage has a small patch of ground appended to it, which is devoted to horticultural productions, and on which are exhibited diligence and taste. The cottage itself is hung around with wild or cultivated vines, whose blossoms make their daily tribute of grateful fragrance to the occupants of the humble dwelling. This is wise. Man lives to enjoy the bounteous goodness of his Creator; and by salutary care and diligence he can strew around him the agreeables in nature in a greater proportion than a wise Providence has seen fit to bestow. Without this agency of his Creator, he has a right to do so, and these things will come to his aid in sustaining the ills which are incident to this state of being: and that is certainly worthy the attention of every man, which will lighten the burthens of life and render *home* a delight, although it should be one of poverty. But it is painful to reflect how little things, seem to be understood in this country; with the exception of some gardens in our cities and suburbs and a few sprinkled along in country towns, there is very little done to improve the quality of horticultural productions, or to secure the rich bounty of a well cultivated garden.

Horticulture, after all that has been said

and written, deservedly too, in its commendation, is but an enhanced department of the more enlarged science of agriculture. It is the great on a reduced scale; and to a certain extent is the practicable cyclopedia as well as the model-farm of the agriculturist. And being considered as a subordinate branch, has not heretofore received so much attention as perhaps it merits.

It is to be considered that the HORTICULTURIST is, if we mistake not, intended for the benefit of the farmers, but has many other readers, professional men, merchants and others residing in cities and villages, many or all of whom have gardens in which to raise useful and ornamental plants for convenience and pleasure, furnishing a healthy and delightful exercise and amusement.

Alas! how few properly study—how few in our country, through want of merited reflection, duly appreciate the value of the garden. It has not been so in all places or times, though necessarily imperfect, because, like mathematics, its utmost points of excellence seem forbidden to human attainment. Our great proto father enjoyed in his garden a satisfaction denied to the most fortunate of his descendants, a happiness unattainable by his children, for the garden of Eden was made, not by human hands—it was the work of God. When Adam was driven from his first home of indescribable bliss, he, by the labor of his hands and sweat of his brow, made his little garden in other and less fruitful soil. In all times and by all generations since, the hardy husbandman has had his garden. It is a matter of surprise that, while sciences of later birth have advanced almost to perfection, horticulture, perhaps the most necessary to man, has been comparatively so neglected and unimproved, sad to our shame, in this land of freedom.

There are few things more certainly indicative of good taste and a cultivated mind in an individual of any class than a well laid out and neatly managed ornamental tree and flower garden; and rarely indeed do we find a man who has any claims to

the title of a good farmer, who does not also have a good vegetable garden. Such a garden is an appendage to every farm, indispensable, and which will never be overlooked by the man who has any pretensions to economy. A garden is not less necessary for a mechanic or professional man, and the few hours that such men have to spare for exercise in the open air, cannot be more profitably or pleasantly employed than in the labors, the cultivation of such a spot requires. Few are aware, who have never paid particular attention to the subject, of the actual profit every farmer receives from the half acre of land devoted to this purpose, or how much the health and comfort of a family is increased where the fruits and vegetables of the garden are daily enjoyed. That there is much less attention paid to the garden than it should receive is evident to all.

A well furnished garden embraces the choicest specimens of both nature and art, carefully selected and judiciously and harmoniously blended together, assisting nature to improve her own productions.

There is one great principle which, with the farmer should have due weight allowed it, and that is, looking for happiness at home. To insure this, all the appliances and additions necessary to secure such a result should be attended to; and perhaps there is no one thing *out of the house* more conducive to this, than a well arranged and well cultivated garden. The farmer should, however, remember that every tree, shrub and flower he cultivates, constitutes a new link of attachment to bind him to his home, and render that home more delightful. They multiply the means of enjoyment, they make additions to our stock of knowledge, they unite us to a more intimate communion with nature, and prevent the concentration of mind on wealth, and the narrow selfishness that is too often its attendant. The garden is a place where many experiments may be made. It is a farm in miniature, where the different varieties of plants, their adaptation to our climate and our soils, and the merits of particular modes

of culture may be tested. Most farmers are not able, nor is it desirable they should attempt experiments on a large scale; they have neither the time or capital to expend while the result may be doubtful to any extent; but in the garden the case is different, and failure can never produce serious loss.

So far as our observation extends, we feel warranted in stating, and do it with pleasure, that the taste for gardening is advancing gradually; and although some may think it a matter of small importance, yet in some points of view it will be found eminently worthy of attention and encouragement. A taste for the pleasures and comforts of horticulture in a country has been justly considered an indication of refinement in the people, and its moral effect has been acknowledged in every instance where it has taken place.

"The amateur will collect from every quarter the beauties of nature, and arrange them to the best advantage; but calling to his aid the ornamental arts, he will heighten their effect by suitable displays of rural architecture, he will embellish his garden with jets and fountains, and with appropriate specimens of sculpture, and the pencil of the artist will give delight to his evening walks with pleasing transparencies.

He will also avail himself of the treasures of conchology—perhaps none but the department of Flora can vie with this in variety, symmetry of form, and in richness of coloring."

The head of a family, if he cherishes the social virtues, will prefer his home to any other place. It is the centre of gravity to all his pleasures and attachments to life. If we see a good vegetable, flower and fruit garden attached even to an otherwise humble cottage, there can scarcely be a doubt but that cottage is the abode of happiness—that home is the most pleasing place to its occupant.

The God of nature paints the flowers of the field more exquisitely, and gives us powers to discover and admire their inimitable beauties. "Do you know," said the amiable Wilberforce, as he was sinking under the infirmities of old age, opening on some flowers shut up in a book, "do you know that I am very fond of flowers?—the corn and things of that kind I look upon as the bounties of Providence—the flowers I look upon as his smile."

"Your voiceless lips, oh flowers! are living preachers,
Each cup a pulpit, and each leaf a book,
Supplying to my fancy numerous teachers
From loneliest nooks."

Poekepsie, July, 1864.

MISCELLANEOUS EXPERIENCES.

BY JOHN JAY SMITH, GERMANTOWN, PENN.

In the September number, a short article on the "Effect of Drouth on Evergreens," suggests a mode of mulching which may better be superseded as follows. At the time of planting, or afterwards if it has been neglected, place flat stones of about 6 to 12 inches in size, all over the roots, and they will be kept moist, causing the trees to flourish in the dryest seasons, and also preventing the growth of weeds. By using this simple precaution, and by the use of much rotten leaf-mould, my grand panacea, I have rarely lost an evergreen among the thousands formerly planted at Laurel Hill Cemetery,

OCTOBER, 1864.

and lately in the extension of that garden depository.

The evergreen I prefer is the Silver Fir (*Picea pectinata*); it has no rival for beauty in youth or age.

A rather new plant, the Weeping Juniper, promises well, and seems likely to be an evergreen weeping willow almost, admirable everywhere, and especially as a cemetery tree. The Salisburia, so well described in the last number, is much neglected, but should be found in every well planted place. It may not be generally known that when first introduced it was cultivated like the

Wistaria, and nailed to walls. In this position it succeeds wonderfully, and it may be made to assume any picturesque status that you may desire. The Weeping Beech is one of the best examples of monstrosity in its manner of growth. I have one that has assumed the exact representation of an elephant, with tail, tusks and trunk, all well defined to the most youthful eye.

This season I exhibited 25 cones of the Cedar of Lebanon, from trees planted twenty-five years ago, and possibly the first ever brought to public notice grown in this country. Whether the seeds are prolific does not yet appear.

A much neglected ornamental tree is the Papaw (*Anona triloba*), now I see called by Gray, *Assimila*. I have fruit this year from a tree the seed of which I planted in 1852. The tree is as ornamental as any of the magnolia family, leaves and bark all beautiful; and, as it is the only fruit we can have of a tropical character and a native, I often wonder it is so much neglected.

The same remark applies to our native Holly; it may be difficult to get, and its wiry roots render it difficult to transplant, but so much the better for those who will take the pains to procure it. It is always beautiful, and soon its berries will assume their winter gay garb.

New Yews are now the fashion: the Golden Yew has no rival in its class, really putting on, in its new growth, the semblance of what is now "so good for sore eyes." The yellow berried, and the Erecta, and Excelsa, are also highly desirable.

I see that some of your best New-Yorkers are preparing a new and elegant rural cemetery beyond the Harlem River, and on the Harlem Rail Road. Won't you give them a hint that *Wood-Lawn*, their name for it, will deserve well of the City if it is properly planted, and tell them how to do it, and what trees to select.

My Hartford Prolific Grapes ripened fully August 12th, and were eminently satisfactory. The next were Diana's, without a flaw. Concord succeeded; and now Delaware, my table regularly supplied; and some of us are quite contented without Black Hamburgs. The kinds named would satisfy even the fastidious, and the succession is perfect. Louisa, a pet of Millers, is a rampant grower and bearer, and comes very soon after Concord; it is an improved Isabella. Try this selection, all who have a spare house wall or trellis.

I was glad to see Charles Downing's name in your last. He ought to use his pen, and so should my former valued contributor H. W. Sargent, Esq., of Wodenethe.

THE SEASON AND ITS FRUITS.

BY WILLIAM BACON.

THE mildness of the last winter was like buds of promise to the cultivator of fruits. Spring opened slowly and favorably to the full development of the luxurious and beautiful things of the earth. Slowly the storms of winter softened down into mild showers, and nature awoke fresh and jubilant as though her winter sleep had been one of pleasant dreams. No nightmares of untimely and fated frosts had fallen upon her bosom. No sudden transitions from extreme cold to unseasonable heat, or from heat to

severe contrasting cold came to molest the even tenors of winter's reign. Our fruit trees all came out in health, and gave abundant blossoms. The fruit of apples and pears set well and continued until the drought, which commenced the latter part of May and was long and severe, caused many of the apples to fall, making the crop light. Pears are much more abundant in proportion to the number of trees, but are diminished in size by the dry weather. Dwarf trees give decidedly the best speci-

mens, and there is no fear that dwarf pear-tree culture will be abandoned where it has a fair trial.

The plum crop has been unusually good. Those who have trees have had large crops, and those who have none should be encouraged to set them out at once. The grape crop is also very fine. The heaviest cultivators in this region are the Shakers of Mount Lebanon. We visited their grounds a few days since, and examined some fifty varieties growing on their vines, and saw no indications of disease or blight of any kind. In addition to the popular varieties of the day, such as Delaware, Rebecca, Concord, Hartford Prolific, &c., we examined the fruit of several seedlings originated in the Society, some of which promise to be valuable. Among these we notice the Mount Lebanon, originated by George Curtis, a very healthy and hardy vine and large bearer, excellent in flavor, some clusters of which were fully ripe in August. They have other varieties of merit coming on, which will no doubt meet with public favor; and are yearly sowing seeds of different varieties and mixtures, in hopes of securing improved fruit. It was pleasant to

see the zeal with which the community enter into fruit culture, and that the aged brethren whose days are bordering on "three score years and ten" possess as much ardor as those in the earlier stages of life's journey. Their love for "*the brethren*" illustrates itself by their daily walk, while their regard for posterity is sufficiently manifest by their labors in its behalf. "By their fruits ye shall know them." By the trees and vines they are planting they are making a more commendable record of their works than many of the vain and empty, not to say lying eulogiums so often bestowed upon the departed.

Small fruits suffered much from the dry weather. The crops of these were light, and deficient both in size and flavor. On the whole, taking the whole matter of fruit into account, and the drought and hot sun so scorching to everything, we may be very thankful for the amount of fruit raised, and though there has been a failure of some kinds, the deficiency is partly made up in others, which more commonly fail but have this year given unusual abundance.

Richmond, Mass., Sept. 3, 1864.

OUR IVY-CLAD CHURCHES.

THE PICTURESQUE ARCHITECTURE OF NEW YORK.

OF late years those having charge of some of our up-town churches have taken pains to train about them creeping plants like the ivy, and the result has been in many instances very gratifying. Perhaps the most noticeable example of this is the Church of the Messiah, on Broadway, near Astor Place, lately occupied by Rev. Dr. Osgood's congregation. The massive architecture of this fine old building is peculiarly suited to this style of natural decoration. Its square heavy Gothic, with machicolated ornaments, is toned down into real grace by the clusters of drooping vines which enwreath the tower; while that portion of the front of the building north of the tower is so completely draped in

green that its very outlines are hidden in exquisite and tremulous foliage. Even Conway Castle and Tintern Abbey, two of the most beautiful ruins of Great Britain, offer no feature (of the size of this portion of the church referred to) of more picturesque beauty; though, of course, in the Broadway instance, much of the effect is lost by the proximity of prosaic hotels and the distracting noise of passing omnibuses.

Rev. Dr. Hutton's Church, on Washington Square, also presents many picturesque points, the vines hanging over the front, parted in the middle by the door—the whole grotesquely suggesting a colossal female face, shaded by "side-curls."

The brown-stone church on the corner of

Tenth street and University place is beautifully enfoliated. The long side on Tenth street, with its graceful Gothic windows, is more attractive than the front elevation, and in extent of ivy garb surpasses any other building in town.

There is a window in the west tower of St. Clement's Church in Amity street, which is a "thing of beauty," not from its design, for in that respect its only merit is the graceful curve of the pointed arch of the window; but for the delicate vine tendrils which enwreath it, and which appear to especial advantage when looked at from the inside through the window. The front of this church has a decaying, antique air, which accords well with the presence of that rare old plant which

"—hauntesth o'er ruins old."

At Zion Church, on Murray Hill, there has been a gentle attempt to train ivy, but a year or two must elapse before it will be "effective," as the painters say.

Rev. Dr. Cheever's Church, in Union Square, takes a front rank among our ivy-clad churches; and the effect is heightened by the contrast between the white marble, of which the church is built, and the dark green of the foliage which lies so tenderly on it. Several of the entrances to the Church of the Pilgrims are Romanesque arches, and are so charmingly overhung with ivy that one is almost tempted to wish they were in ruins. We should not then need to visit the abbeys of England.

Ascension Church, on Fifth avenue, is also well draped in vines; and ere long the elegant Presbyterian church on the block above will rival it in this feature.

These little points in our city architecture—and we have by no means included all worthy of notice in this connection—are quite picturesque enough to deserve the attention of New York artists who take an interest in the city of their home, offering as they do certain studies of architecture and foliage not otherwise to be obtained this side of the ocean.

It is worthy of remark that the largest and most prominent New York churches—Trinity, Grace, St. George's, St. John's, St. Paul's, Rev. Dr. Spring's, &c., are quite free from creeping vines, which would accord well with the foliated ornaments and crocketed spire of Grace, or with the rich Gothic of Trinity; yet would hardly seem in place with the stately Byzantine of St. George's, or the more modern style of St. John's and St. Paul's.

If the ruin of New York could be imagined, there are edifices in the city which might in decay emulate the ruins of Europe. The Custom House might be our Pæstum; the rear of Grace Church (never seen excepting by people who live on Fourth avenue, and can look at it out of their back windows) would be our Melrose; Saint George's, Stuyvesant Square, might be our Jedburgh Abbey, and Trinity our Westminster.—*N. Y. Evening Post.*

BEAUTIFY AND ADORN YOUR HOMESTEADS.

It is with some, and would that it were so with all, the highest aim and end to have happy homes. No ambition is more laudable and praiseworthy than this. With all such, labor and enterprise tend to the realization of this ruling passion of young life's struggle. Being invited by a friend a few years ago, when tarrying in Syracuse, N.Y., for a few days, to accompany him to the home of a friend of his, we gladly did so. After being cordially received and heartily

welcomed, we were soon invited to walk out and survey the homestead of him whose guests we were. After looking over his grounds, well furnished with plants and shrubs and trees, including an abundance of the fruit-bearing species and varieties, our friend asked his friend, who had not then reached the meridian of life, "How he accounted for such a splendid home?" The reply was, "It all depends upon the estimate a man puts upon the dollar."

We have since had occasion often to call this remark to mind, when we have seen well-to-do farmers investing their gains in stocks, and living meanwhile in a most forlorn place, called home. This ought not so to be.

As man has but one life to live, why not make the most and the best of it for them and his? Extravagance and prodigality we condemn; stinginess and Shylock proclivities are intolerable; frugality and economy are praiseworthy; therefore, use the fruits of your skill and labor prudently and wisely. Rather beautify and adorn your homes and make them to yourselves and families the happiest places in the world, than invest your moneys in uncertain stocks, to the neglect of home-comforts, home-pleasures and home-enjoyments.

Says one who lately visited Wm. C. Bryant, the poet, and editor's home, "I went from Greenwood to Roslyn (L. I.) to pass a couple of days with the friend whose residence for nineteen years has made that place memorable. He said, with great feeling, that death had never crossed his threshold, and no coffin had been borne from his home. Yet, in his kindly and serious presence, it is easy to meditate upon all the shadows as well as the lights of human life. He who wrote the poem to the 'Fringed Gentian,' is also author of 'Thanatopsis,' and good company for the lover of nature and man, whatever his mood. His house and grounds are charming. Providence has smiled upon him alike in the choice and the culture of his land. In trees and shrubs he is successful as no one else within my knowledge, and his flowers, fruits and forest show nearly all that one zone will harbor. His favorite grove is a memorable haunt, and will always be classic ground; for he has seen the wood shoot up to its present growth, and his own hand, with loved and gentle helpers, has laid out and formed those winding paths. Yet beautiful as the whole place is in woods, garden and waters, it is by no means fully developed. It is a diamond in the rough; and if his ideas are carried out, it will be transformed into a

paradise that no other fifty acres on earth can surpass in the same style. Bryant seems young in step, tone and temper, yet he will be seventy years old in November—a sober age which many of our conspicuous men have attained, or are nearing. Dewey, Everett, and, I believe, James Walker, have reached that venerable term. Long may they live, and never have reason to say that their days have been few or evil."

"But," says one, "few can have such a homestead as this." True indeed; but a beautiful home does not depend upon the investment of large sums of money. It is making beautiful according to what one has. A beautiful house can be built for \$1,000; and a very uncomely structure may be erected at the cost of \$100,000. Thus you may conclude that taste and purpose have quite as much to do in providing a beautiful home as plenty of money.

Says Bryant in his paper, the *N. Y. Evening Post*, "One of the finest country seats in the United States is that of Winthrop Sargent, of Fishkill, in that beautiful mountain region just where the Hudson enters the Highlands. Out of twenty-two acres, Mr. Sargent has created a sort of terrestrial paradise, planted with all manner of pleasant trees, both for fruit and ornament. It is most especially an arboretum of evergreens. Nearly all that will bear our climate, and many of those which require the shelter of the conservatory are here brought together, representing every belt of latitude in the four quarters of the globe, whether north or south of the equator. Here are plantations of the rhododendron in its various beautiful varieties, with flowers of its various shades of color, equal in luxuriance to any in England, where that plant is a favorite, and where it flourishes with great vigor. Here many plants, which do not well bear the alternations of frost and sunshine which belong to our climate, lurk in the shade of tall cedars, and defy the severity of our winters. Among these is the deodar cedar and the European holly, both of which are subject, when in situa-

tions exposed to the sun, to be nipped by the winter weather. Mr. Sargent, in acclimating the evergreens of the old world, has found that one of the hollies from that quarter, namely, the *Ilex laurifolium*, or laurel-leaved holly, a very beautiful species, with smooth, glossy foliage, endures our winter unhurt and undisfigured by extreme cold followed by warm sunshine. This is a valuable discovery. One of the most remarkable characteristics of the place, however, is the art with which the grounds are laid out. Standing on Mr. Sargent's lawn, one might suppose that the estate was of almost boundless extent. By judicious planting he keeps out of sight the neighboring country seats, and only opens vistas which lead the eye to grand objects and vast distances. Through some of them you have broad views of the great Hudson, gleaming with sunshine, sails and bright clouds.—One gives you a view of the city of Newburg, seated on the declivities of the opposite shore. Looking in other directions,

you have sight of extensive meadows and pastures reaching to the foot of the mountains which form the northern part of the Highlands. Other views show distant forests, in a landscape apparently unbroken by either fences or roads. The lawn is kept shorn as smooth as an English bowling green by Swift's machine, which, from time to time, is passed over it, cutting off the short grass and leaving it on the ground as a top-dressing."

There are scattered over our beloved Commonwealth, and New England, many beautifully adorned homesteads, but we regret to say that there is not one where there should be thousands. No part of our country is naturally so well suited to the fitting up of elegant and beautiful homes as New England, where every diversity of soil and surface abounds. Let our readers whose locality has taken root, constantly seek and strive to improve, beautify and adorn their homesteads.—*Boston Cultivator*.

THE SAVOY CHAPEL.

AN ARCHITECTURAL LOSS.

THE Savoy Chapel in London has been destroyed by fire. It was the last remnant of the ancient palace of the Savoy, and was the property of Queen Victoria in right of her Duchy of Lancaster. The fire was occasioned by the escape and ignition of some gas in the interior. A London paper says:

"There is a tradition that when the Liturgy in the vernacular tongue was restored by Queen Elizabeth, the Chapel of the Savoy was the first place in which the service was performed. It was in this chapel also that the conference between the Episcopalian and Presbyterian divines on the Book of Common Prayer was held in 1661. The chapel, which was erected about the beginning of the reign of Henry VIII., was originally connected with an hospital. Its interior dimensions were ninety feet by twenty-four feet, and it was in the Gothic style of architecture, with a curious little tower

at the southern end, which, with the main walls, still survives. The ceiling, which has been entirely destroyed, was the most striking feature of the interior of the chapel. It was wholly of oak and pear tree, and divided into one hundred and thirty-eight quatrefoil panels, each enriched with a carved ornament either of sacred or historical significance. The panels numbered twenty-three in the length of the chapel, and six in its width. Ten of the ranges had each a shield in the centre, presenting in high relief some feature or emblem of the passion and death of the Saviour, and all devised and arranged in a style of which there are many examples in sacred edifices in the fifteenth and sixteenth centuries. The panels throughout the rest of the ceiling contained bearings or badges indicating the various families from which the royal lineage was derived, and more particularly the alliances

of the House of Lancaster, each panel being surrounded by a wreath richly blazoned and tinted with the livery colors of the different families. There were many ancient mural monuments in the chapel. Among them was an imposing one in the chancel, to the memory of Sir Robert Douglas and his lady, erected in the early part of the seventeenth century. In a pretty Gothic niche on the opposite side was the figure of a lady kneeling, commemorative of Jocosa, daughter of Sir Allan Apsley, lieutenant of the Tower. On the western wall, near the altar-piece, was a beautiful ornamental recess, in the back of which had been effigies engraved on brass. Near this was a small tablet to the memory of Ann Killigrew, 1685, daughter of one of the Masters of the Savoy, and niece to the well-known jester. This was the lady described by Dryden as

'a Grace for beauty, and a Muse for wit.' Of Arabella; Dowager Countess of Nottingham, who was interred in the chancel, there was also a fine monument. Some of these have survived the ravages of the fire, but not so the fine altar-piece and the large stained glass window surmounting it, which have been entirely destroyed. In the lower central compartment of this window was a figure of St. John the Baptist, to whom the hospital of the Savoy was dedicated. The side compartments contained emblems of the other Evangelists, while the ducal coronet, the red rose of Lancaster, and the lions and *Neurs-de-lis* of the Plantagenet escutcheon were introduced in other parts. Over all was the inscription, 'This window was glazed at the cost of the congregation, in honor of God and in gratitude to our Queen Victoria.'

TENTH SESSION AMERICAN POMOLOGICAL SOCIETY.

FROM OUR OWN CORRESPONDENT.

ROCHESTER, N. Y., Sept. 15, 1864.

Messrs. EDITORS:

The American Pomological Convention commenced its biennial session here on 13th inst. at 12 M. The meeting was called to order by the Secretary, Mr. Vick, who read a letter from Marshall P. Wilder, the President, stating that his health was improving, and he hoped would soon be restored, but that he felt unwilling to incur any risk by leaving home at this time. Much sympathy was felt by the members for his illness, and ardent hopes expressed for his complete recovery. He was subsequently unanimously re-elected President of the Society for the ensuing two years. There was a good attendance of members, and many new names were added to the number and the usual good feeling prevailed. We were delighted to meet with and recognize many old and familiar faces.

The Secretary invited John A. Warder, one of the Vice Presidents, to take the chair, who immediately called the meeting to order and proceeded to business in a prompt and satisfactory manner.

The usual committees were appointed and the fruit discussion opened with the Ben Davis apple, which has become a favorite at the West. It has been called by different names in different localities, the most prominent of which was the New York Pippin; no one could tell why, and it appeared not to be known in New York by that name. On submitting the question to vote, it was decided that it shall hereafter be known as Ben Davis, and that the other names be no longer used. An interesting conversation upon the value of certain fruits in particular localities ensued, during which the fact was elicited that some of our finest New York apples, such as the Newtown Pippin, Baldwin and Greening did not succeed well in the Western States, and indeed were quite worthless in Ohio, Illinois and Missouri; that other valuable varieties were cultivated there which had not, and perhaps never would, attain a favorable position in the Atlantic States. Dr. Trimble of New Jersey entertained the members and their friends, during the evening, with a dissertation on the Apple Moth and Curculio, which

was repeated the following day at the call of the presiding officer. He then presented drawings of the insects in their different transformations, together with the heads of birds which preyed upon the larva, and a specimen of hay band or rope and chamois leather which had been used as traps to catch the insects. In each of these were large numbers of the larva of the Apple Moth. He recommended that the hay rope be wound three times around the body of the tree, close to the bark, the ends tucked in for fastening, and in a few days that it should be moved briskly up and down to kill the worms that had already hid away with intent to remain in such snug quarters for the winter. A member present calculated the quantity of hay requisite for an orchard of 2000 trees, at one ton or one pound for each tree, and we understood him to say that the bands could be twisted by a man in one day, that therefore the expense would be little or nothing for a single tree. Dr. Trimble invited attention to the value of birds who destroyed large numbers of these pests of the orchard, and especially named the Woodpecker, showing that this bird had an instinct which enabled him to penetrate the bark of a tree exactly at the right place; that when he thrust his bill through bark an eighth of an inch thick, he always struck a worm: this was demonstrated by showing pieces of bark from apple trees, perforated, the centre of the hole being at the centre of the worm's hiding place.

The discussion on the second day was mainly upon grapes. A committee was appointed to bring the specimens forward for examination and comparison. The Adirondac received attention first, not from its alphabetical position, but because of the interest felt in this new candidate for public favor. J. W. Bailey who brought the specimens, gave an account of its origin at Port Henry and his more recent cultivation of it near Plattsburgh, New York, in latitude 44° North. The fruit was not quite ripe on the 16th September; it was however compared with other grapes grown at the

same place. Delawares had but just begun to color, and Concords were quite green and had not begun their third swelling. Mr. Bailey stated that Adirondacs grown at Port Henry on Lake Champlain, about 50 miles South of Plattsburg, were already quite ripe, though none on his vines at the latter place were so. Several other persons gave favorable testimony as to the hardiness of the vine, and the general impression was that a new and valuable variety is now before the public for trial and experiment.

The Iona was then introduced and its history given by its proprietor, who stated that he had, several years since, planted some thousands seeds of Isabella and Catawba, the result of which was that one plant of each only had been selected for cultivation, he thought this a Catawba seedling. The fruit exhibited was a handsome amber color, the bunch rather loose but well formed, berries medium size with an agreeable vinous flavor, melting, partaking in some degree of a foreign character. It was said to ripen several days before the Delaware, but was not fully ripe to my taste. The vine was pronounced by several gentlemen present to be hardy.

The Israella was then introduced. This is a black grape of the Isabella class, sweet, but not high flavored, said to ripen as early as the Hartford Prolific and Creveling—the fruit exhibited was quite ripe 16th September. It may become a favorite from its early ripening. An effort was made to have its name changed, as too much like Isabella, but without success.

The Miles was shown by Charles Downing as the earliest known black grape of good quality, and was pronounced very good. Several gentlemen from Pennsylvania and New Jersey reported favorably upon it. It originated in Pennsylvania, and has been in the hands of amateurs for several years. We shall doubtless be made better acquainted with its merits by those who have cultivated it.

The Creveling, a black grape, exhibited by Daniel Harkins, of Wilkesbarre, was grown at Towanda, in the northern part

of the State of Pennsylvania, was fully ripe and delicious. This is both a table and wine grape, with thin skin and melting pulp under the pressure of the tongue, while all agreed on its early ripening, hardness and fine flavor, some fears were expressed that it would not be a good market grape as the berries were loose on the bunch, to which one gentleman replied that "we do eat with our eyes." The leaves were said to be sunburnt this season at St. Louis. On the whole the testimony was so favorable that we think it will be extensively cultivated, ripening as it does about 1st September in favorable situations. After the discussion Mr. Mercer on exhibited a basket of the fruit raised in central Pennsylvania; also, a bottle of wine of fine flavor, the pure juice of this grape.

Mr. Hooker, of this city, then called attention to a new seedling grape never before exhibited, in proof of the fact that Hybridization is no longer a problem. This was a beautiful cluster, not yet ripe, grown by Mr. Moore of Rochester, of larger size, in bunch and berry, than the Diana, and the foliage which was also shown partook of both native and foreign characteristics. The female plant selected by Mr. Moore was the Diana fertilized with the pollen of the Black Hamburgh. Some one called it the Diana Hamburgh, which, however, was said not to be its name.

Several White or Green Grapes were on exhibition. Prominent for high flavor and early ripening were:

Allen's Hybrid, which ripened on the Hudson on 10th September, and said to be

the best grape of its class, in all respects, yet known. Some members reported it as showing mildew in certain localities, but it was pronounced more hardy and vigorous than the Rebecca.

The Rebecca was said to thrive under high culture at Hudson, two vines growing there having produced for two years in succession 300 lbs. of fruit each season.

The Lydia, another white grape, was exhibited, and its admirers claimed for it, equality and even superiority to Allen's.

Among the older varieties the Concord was a great favorite with Western members; at Pittsburg, St. Louis, and in Illinois it is said to maintain a high character, and produces excellent wine.

The Delaware is a general favorite from Maine to Missouri, though the wine made in the last-named State is not so good as that of the East.

Hartford Prolific and Concord are spoken of as fine market grapes, selling readily from their earliness at high prices.

Catawba, the impression is that it is likely to lose its high position from its tendency to rot, for which no remedy has yet been discovered.

Isabella was voted down from the list for General Cultivation, to that of Special Cultivation, from which we are to infer that the Pomological Convention no longer recommends it for cultivation, except in favorable situations. I propose to continue my observations for your next numbers if you think them worthy of publication.

X. X. V.

PLUM CULTURE.

BY WILLIAM BACON.

ONE of the most extensive and flourishing plum orchards we ever saw was shown us a few weeks ago since by a member of the United Society at New Lebanon, N. Y. The soil in which the trees grow was a heavy loam, and is kept in continued cultivation. The tree tops, when we saw them,

were hung with strings of the fairest fruit. No indication of black rot was to be seen in the garden. They informed us if the knot began to show itself, it was immediately taken off. The Grand Turk had given no marks of invasion on their fruit, which they said was prevented by sprinkling lime dust

over the trees freely. This was repeated often enough to warm them up if they called for their breakfast, and not liking the bill of fare, they left for parts unknown.

Another experiment.—Last spring we had several plum trees which had blossomed for two or three years but set no fruit.

When in bloom last, we sowed freely of plaster over the top of the trees. From that result or some other cause, they gave us a good crop the present season. The conclusion is, that the plaster did no harm, while it was very probably the saving of the crop.

Richmond, Mass., Sept. 3, 1864.

EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Address all Communications, for the Editorial and publishing departments, to GEO. E. & F. W. WOODWARD, 37 Park Row, New York.

THIS number of the HORTICULTURIST appears throughout in new type, and as soon as the present stock of paper on hand is exhausted, we shall improve both its weight and quality. Our arrangements are such as will make the New Volume for 1865 a very superior and desirable one. We shall continue the subscription price at Two Dollars per annum, and our only club rates will be four copies for Seven Dollars, single numbers Twenty cents; we presume that none of our readers will object to the advance in club rates. All subscribers and readers of this Magazine are earnestly requested to extend their influence to enlarge our subscription list. The HORTICULTURIST should go by dozens and hundreds into every village and city in the country, and if all took it in the same proportion as Newburg, Po'keepsie, Pittsburgh, Cincinnati, Cleveland, &c., there would be seen the same refining influences in rural art, and the same developments in horticultural taste as characterize the residents of those cities. Every one of our readers can, with a little exertion, add a dozen subscribers to our list, and we hope all will endeavor to do so. Our New Volume will be well worthy of the attention of every one who cultivates a garden, vineyard or orchard, who has a home to adorn and beautify, or is interested in the progress of rural art and taste.

NOTICE TO CONTRIBUTORS.—We have lately received several letters of enquiry relative to manuscript contributions, sent for publication in our columns; also stating that the letters requesting their return, if not acceptable, have not received any attention. We desire to state to all contributors or correspondents, that hereafter we shall acknowledge promptly, by letter, the receipt of all matter sent for our columns, and, if not approved of, shall state the reasons why. Those who have sent any articles and have had no acknowledgement of their receipt, either in the Magazine or by letter, will understand that they have failed to reach us. We invite all the readers of the HORTICULTURIST who have any items of interest or value, to communicate them without any hesitation, and we would be glad in all cases to receive copies of unnoticed contributions; the courtesy of a reply we deem to be due in all cases.

We consider the United States mail to be entirely safe for the transmission of written matter and subscriptions or small amounts of money; the percentage of loss is less than the rates of exchange.

Address invariably all communications intended for the editorial and business departments of the HORTICULTURIST to

GEO. E. & F. W. WOODWARD.

37 Park Row, N. Y.

WE call the attention of our readers to the notice of removal of Mr. Peter Henderson, in our advertising columns. His green-houses and place of business are now at South Bergen, N. J., two miles from Jersey City, and can be reached by Horse Cars every ten minutes from the Jersey City side of the Courtlandt Street ferry from New York. His post office address is as before, Jersey City, N. J. We understand that he has erected a very complete and extensive range of propagating buildings, and as no one knows better than he does all the requisites of success in building, management and attention, he will carry with him all his old customers, and we hope will add a large list of new ones.

WE regret to learn of the recent death of A. G. HANFORD, Esq., of the firm of A. G. Hanford & Brother, proprietors of the Columbus Nurseries, at Columbus, Ohio. Mr. Hanford ranked high among the practical and successful Horticulturists of this country, and his contribution to the leading Agricultural and Horticultural Journals added much to the value of their columns. He was in the prime and vigour of life, and his sudden death will be seriously felt. He was universally known and esteemed throughout the West, being the pioneer Nurseryman of Wisconsin, where for many years he was proprietor of the Woodside Nurseries at Waukesha, and acquired an enviable reputation for ability and integrity.

COMMERCIAL NURSERIES.—Later in the season, if we can command a few leisure days, we propose to visit many of our principal nurseries, and take some notes. The commercial nurseries in this country have built up a trade that commands attention; their existence scarcely goes back of the first publication of the *HORTICULTURIST*. But, since the writings of Downing have laid the broad foundation of a refined and popular taste in landscape gardening and horticultural pursuits, the progress of the nursery trade has been on-

ward and upward, until it ranks among the first of business callings. Many of the largest and most successful nurseries in the country have been among the most industrious and persistent advertisers in the *HORTICULTURIST*: through bad seasons and good, in financial prosperity and adversity, in peace and war, their names and business have uniformly appeared with a perseverance and liberality that deserves the success that has followed. The circulation of our Magazine is such as to bring the planting community in direct communication with the nursery trade, and the trade in contact with each other. We reach everywhere those who have fine places to embellish and beautify, and who have money to spend. Those who have orchards and vineyards to make take the *HORTICULTURIST*, and read it, advertisements and all, as a matter of business. Every public library and every horticultural society that furnishes its address to us receives our Magazine. It is found upon the library table of gentlemen of wealth and taste, throughout the land, and it reaches every intelligent horticulturist in some way or other. None who are interested in the progressive arts of landscape gardening and rural improvement, who have vineyards, orchards or gardens to make, who raise fine trees, fine fruits or flowers, or have a home to make beautiful and attractive, but what can find in every annual volume of this standard publication a many fold return of the subscription price. We intend the volume for 1865 shall exceed all others in its value, and hope our present subscribers and readers will aid us in extending our field of usefulness.

ONE of our correspondents has given us so graphic an account of raising Squashes under difficulties that we cannot do better than copy his description for the information of our readers. His method of cultivation may be safely followed as the very best, and his notice of the enemies of the vine, and the remedies applied, are worth remembering. We illustrate the larva and perfect

insect *Egeria cucubita*, or squash vine borer, in further explanation of the text:

"With a heavy clay soil and numerous unsuccessful trials I was inclined to abandon the cultivation of squashes in despair. Try again says Perseverance, and so I did.

The seed were started in rich compost earth in pots in the house. The bed was made mellow and light with coal ashes, the holes were dug ten inches deep and filled with horse dung, then covered with sand hauled two miles from the nearest sand-bed, fine garden mould was placed on top, the plants with the clod carefully removed from the pots placed in these hills, and they were duly watered. Then came the striped bug and these were daily picked off and scared away; powdered with scotch snuff, gypsum charcoal dust, sulphur and soot, regular waterings with soap-suds followed, and during the drought of a couple of months evening applications of water which had stood in the sun all day, to take off the chill, were made, and now and then liquid manure to give them vigor, in the hope that when the squash bug appeared they would have strength to bear his attacks and live. Under this treatment the vines grew wonderfully, incipient squashes were developed, and I thought this time I was "some pumpkins." The inevitable squash bug came and was combatted by direct attacks and flankings until it was believed that his confederacy was demoralized, if not destroyed, so severely and in such numbers were they pinched, that the squash garden had the fragrance of rotten pears.

Now the eggs were sought for and crushed, and the dry weather set in. Water—water—carried in buckets until the arms and shoulders ached, and this became a regular daily occupation, with an apparent probability that like the stone-rolling of Sysiphus, it would last for ever. After many weeks came a warm, plentiful rain, penetrating deeply into the earth, and we hoped that our cares and labors were to be ended; but not so, the squashes no longer looked luxuriant—they drooped. Ah! *je comprend*, a new crop of squash bugs from the eggs that had

been deposited and escaped notice! followed by a Fort Pillow massacre. Still they wilted—the leaves turned yellow as if struck with death, and the fruit shrivelled. On investigation the vines were found dead at the root, breaking off at the surface and



rotten. Further examination showed that a borer had perforated the stem, a whitish larva about three-fourths of an inch in length when found, with a black head and numerous spots on the body, and who entirely destroyed the plant, working through the center of the main stem, and through the root to undergo its next transformation in the earth below. Neither tobacco water, nor quassia tea, nor solutions of glauber salts, nor infusions of alder, nor walnut leaves, nor decoctions of hops, could be applied with any certainty here, although I tried them all. I found nothing so effectual as a surgical operation on the vine, and a determination to take no prisoners. With a sharp knife I took out a piece of the vine near the root, and in nearly every case found my borer severely, if not dangerously wounded. The question now arose, will this surgery kill the vine? If so, let it die, for die it must if undisturbed. From present appearances I shall have squashes! Indeed, I have already picked Summer squashes, which by their vigorous growth were provident enough to send out another root before the



original one was destroyed. Of the Boston Marrow and Hubbard I propose to give you an account at a future time. The winged insect that produces the squash borer has an "orange colored body spotted with black, and its hind legs fringed with long

orange colored and black hairs." I hope my squash experience will not be considered a

BORE.

We are indebted to B. H. Mace, of Newburgh, N. Y., for a box of fine Delaware Grapes. Mr. Mace has the largest vineyard of the Delaware with which we are acquainted, part of which has been in bearing several years, and has always produced superior fruit.

THE ADIRONDAC GRAPE.—We received this A. M., September 23, from John W. Bailey, Esq., of Plattsburgh, N. Y., two bunches of the Adirondac Grape, not perfectly ripe to a close, critical taste, but in fine eating condition, and a little more matured than those sent by Mr. Sheldon. Mr. Bailey states that his earliest and largest bunches are already gone. The bunches received were of fair size, quite compact and showy, berries tender, juicy and sweet; should judge from the sample that the Adirondac would rank among the first of our native grapes. Of its growth, habit, &c., we can say nothing from personal knowledge.

GRAPE CULTURE ON THE ISLANDS OF LAKE ERIE.—The western extremity of Lake Erie is filled with islands, many of them possessing a fertile soil and genial climate, and beautiful scenery of the most romantic character. Until within a few years, these islands were considered almost valueless from their isolated position during most of the year; but latterly a few enterprising grape cultivators have planted several of them with vines, and they have suddenly become famous as producing the best Catawbas and Isabellas to be found in the whole country. Thus the application of science and well directed effort to elegant horticulture, and to practical agriculture, mark the progress of the age.

The principal of these islands is Kelly's, so called from the name of its owner. Its reputation as a grape producing island overshadows that of all others in its vicinity,

and Kelly Island grapes command a premium in market. This island is about 12 miles from Sandusky City. Still farther north seven miles is found Put-in-Bay Island, on which grape culture is just commencing on rather an extensive scale. This island is about three miles in length and one mile wide. It possesses a beautiful harbor, and good bathing and fishing are found in the vicinity. It is destined to be quite a summer resort. A few years since there was not a cultivated grape on this island, and there are now between 100 and 200 vineyards of various sizes, paying their owners an enormous percentage on the amount of investment. The lowest estimate of the full-bearing grape crop is \$500 per acre. Lands suitable for grape culture are now sold from \$300 to \$1,000 per acre.

Surrounded as these islands are by large bodies of water, the temperature of the air preserves an uniformity that is highly favorable to fruit growing. Sudden changes of temperature are very prejudicial to the successful culture of the grape. At this locality each returning season is sure of bringing a fair crop of fruit.

The mode of culture is similar to that in vogue in Ohio. The plants are grown from cuttings, and at two years from the first planting the young vines are transferred to the vineyard. They are here placed in rows about eight feet apart, so as to allow a wagon to be driven between them, to take in manure or to cart away the fruit. The plants are grown to stakes and tied with bark or willow twigs. They commence bearing at two years from the time the young vines are planted. A vigorous system of pruning insures good crops, each vine averaging from 15 to 20 pounds of grapes. A few prefer the trellis system of culture, and it is practiced to some extent. When ripe, the fruit is picked and carefully packed in shallow boxes, and in these packages sent all over the country, some even finding their way to New York city. During the season, the principal hotels in Buffalo, Rochester, Cleveland, and other places,

supply their tables with Kelly Island grapes. This business of grape culture and wine making on the islands of Lake Erie is yet only in its infancy, but will rapidly develop with each succeeding year, until it reaches a point that will astonish even those now engaged in the enterprise.—*Western Rural*.—Detroit.

THE WESTERN RURAL, a weekly journal for the farm and fireside, price \$2.50, H. N. F. Lewis, Editor and Publisher; Detroit, Michigan; No. 1 & 2 just received. This paper is a continuation of the *Michigan Farmer*, in a new dress and with a new editor. It presents a handsome appearance, and the contents are carefully prepared and selected. The market reports of New York, Buffalo and Detroit are given in full. The handsome fortunes made by wool buyers, the past season, out of those farmers who do not take agricultural papers, should be a warning for the future. A farmer who does not take one or more of the best issues of the agricultural press, no matter what the price is, lacks the first principle of success in his business: there is nothing, in the whole economy of farm operations, that pays a larger percentage of profit; not in instruction merely, but in actual dollars and cents.

PRINCE & CO.'S STRAWBERRY ADVERTISEMENT.—In reading the advertisement of Messrs. Prince & Co., of Flushing, on page 11 of our advertising sheet, it will be seen that they advertise a descriptive catalogue of 2,000 varieties of strawberries. If our readers will substitute 200 varieties for 2,000, the impression they will then receive will be precisely that which Messrs. Prince & Co. intended to convey.

NEW METHODS OF COLORING WOODS.—Dr. Wiederhold communicates to the *Neues Gewerb für Kurhessen* the following directions for coloring wood: "The surface to be colored is smeared with a strong solution of permanganate of potash, which is left on a longer or shorter time, according to the shade required. In most cases five minutes suffice. Cherry and pear-tree woods are

most easily attacked, but a few experiments will serve to show the most favorable circumstances. The woody fiber decomposes the permanganate, precipitating protoxide of manganese, which is fixed in the fibre by the potash simultaneously set free. When the action is ended the wood is carefully washed, dried, and afterwards oiled and polished in the ordinary way. The effect of this treatment on many woods is said to be surprising, particularly on cherry wood, to which a very beautiful reddish tone is communicated. The color is in all cases permanent in light and air."

CATALOGUES, &c., RECEIVED.

Price List of Fruit and Ornamental Trees, Grapevines, Flowering Shrubs, &c. Phillipsburg Nursery, Warren County, N. J. Charles Davis, Jr., Proprietor.—The Phillipsburg Nursery is located near the junction of the New Jersey Central with the Delaware and Lehigh Valley Railroads, and has good facilities for transportation to all parts of the country.

PRICE LIST FOR AUTUMN, 1864. Plattsburgh Nurseries. John W. Bailey, Plattsburgh, Clinton Co., N. Y.—These nurseries are the headquarters of the Adirondac Grape, which is now attracting so much attention among the new varieties recently introduced to public notice. In addition to the "Adirondac," Mr. Bailey offers the usual varieties found in well stocked nurseries.

PRICE LIST OF GRAPE-VINES. Richmond Hill Nursery. G. E. Meissner, Richmond, S. I., N. Y.—Staten Island is a pleasant place to visit or to live on, and the sail across the magnificent bay of New York can be scarcely equalled in any other harbor in the world. The Richmond Hill Nursery is accessible from New York by steamboat and Staten Island Railroad in one and one-quarter hours, five times daily.

DESCRIPTIVE CATALOGUE.—New England Grape-Nursery, Bridgeport, Conn.—Wm. Perry & Son, proprietors.

Catalogue and Price List for fall 1864 and spring of 1865.—Montclair Small Fruit Nursery.—E. Williams, proprietor, Montclair, N. J.

J. F. DELIOT & RYDER's annual Catalogue and Price List of Grape Vines for 1864 and 1865, Sing Sing, New York. This contains directions for preparing ground, setting out plants, and cultivation. Mr. Deliot is well known as one of the ablest and most successful propagators in the country.

WHOLESALE Price List of the Washington Street Nursery, Geneva, N. Y., for the Autumn of 1864 and Spring of 1865. Bronson, Graves & Selover, proprietors.

Illustrated Catalogue of Hardy Flowering Bulbs, and Guide to the Flower Garden for Autumn, 1864.—James Vick, Rochester, N. Y.—Valuable to all who desire to purchase bulbs or seeds. In January, Mr. Vick will publish his Illustrated Annual Catalogue for 1865, with full directions for sowing seed, transplanting and after culture, with 30 wood engravings and two colored plates.

Catalogue and Price List of Grape Vines for autumn 1864 and spring 1865.—A Pfeiffer & Son, Avondale Nurseries, Cincinnati, Ohio.

Price List—Grape Vines, Roses, Greenhouse, and Bedding Plants.—Isaac Jackson, West Grove, Penn.

CORRESPONDENCE.

THE ADIRONDAC GRAPE.—In answer to many of your correspondents, I take pleasure in informing them that I have fruited the Adirondac in latitude 44°. The vine was planted out in May, 1861, on a clay soil worked one foot deep, with sand, ashes and manure, near the top of a hill descending to the north-east, partially protected on the north; grew nine feet in 1862, cut back, covered with soil three inches; grew several canes ten feet in 1863, cut back to six feet. Four canes retained this spring, from which forty bunches of fruit have grown. This day September 12, some berries are fully ripe, and the whole are as ripe as I have seen Isabellas on sale in Boston, sent from New Jersey. I think it equal to the Delaware in quality; but on this point tastes will differ, as two good judges will scarcely ever agree as to which is the best apple.

I think the Adirondac will be the most popular grape for northern climates. It is incomparably better than any other which will uniformly ripen here, except the Delaware, and is at least two weeks earlier than that, and four weeks earlier than Isabella, Diana, Rebecca, etc.

It is hardly to be expected that the reputation of a grape should be fully established in three years after its introduction; such at least was not the case with the Delaware.

Profiting from my own experience, and having but little room, I shall dig up and throw away some twenty Isabellas and other varieties, and replace with the Adirondac.

Yours respectfully,

H. S. SHELDON.

Middlebury, Vt., Sept. 12th, 1864.

EDITORS HORTICULTURIST.—In regard to the earliness of the Adirondac Grape, I write to say that Mr. Witherbee picked a ripe bunch from the original vine, Aug. 24, which has been sent to the *Country Gentleman*. Mr. Ed. Pearce, of Providence, writes that "Adirondac is ripening and will be in eating in advance of any other variety." Three vines in Vermont I learn are in fruiting; "on the 24th, the fruit was fully colored, and Delaware on the same *trellis* not colored in the least." I am getting most satisfactory letters from all parties.

It will prove just as represented by Mr.

Bailey, I am confident. It is a source of regret to me that my own vines are not in fruit this season, but we are often cut off from our crop of grapes by late frosts in the Spring. I am in the worst locality in the world for grapes.

J. W. CONE.

Norfolk, Conn., Sept. 3.

MESSRS. EDITORS—The article in your September number, on grape grafting, has interested me, and I respond to the call to state my experience, whether successful or not.

I put in a large number of grafts last fall, and find many of my roots died outright. Will Pratiquer do me the favor to explain, if he can, the cause of this? I met with no success whatever in grafting, which, I think, is owing in a great degree to my using scions with single buds: when the dry weather came, they dried up and died. I am a new beginner, but feel inclined to try again.

SPORTSMAN.

Sept. 12th, 1864.

EDITORS HORTICULTURIST.—Yours of the 27th is at hand. The late frost destroyed my crop of grapes on all young vines and most of the others (June last). Mr. Bailey writes me, under date of Aug. 15, that the Adirondac in his garden began to color and no other variety had. Judge Jas. Gibson, of Salem, N. Y., ripened the Adirondac last season, and says, "it was unsurpassed in flavor and ripened fully ten days before the Delaware." G. H. Martin, Esq., of Norwich, Ct., writes me, under date of March 3, 1864, "I have fruited the Adirondac, and can truly say that in my opinion it stands first on the list of hardy grapes, everything considered, its *earliness*, size of bunch and berry, its soft and delicious pulp *being sweet to the centre*. I know that many other kinds are similarly represented, but I have never seen any that approached the Adirondac in the tenderness of its pulp. To my taste it has no rival." The above was unsolicited, and the gentleman an entire stranger to me. Some of the vines sold by me last fall are

now in fruit. I expect some fruit from the original vine, and if you wish, will send you some.

J. W. CONE.

Norfolk, Conn., Aug. 30, 1864.

Middlebury, Vt., Sept. 20, 1864.

MESSRS. EDITORS—*Gents.*—I forward by Express a box containing two bunches Adirondac Grape. The birds destroyed nearly half my fruit from this vine, and to keep them off I made a tight board fence around it, which probably has not improved the fruit.

To-day Concord and Lyman are fully ripe. You have never seen the Lyman, I suppose. It makes a very good wine with a *little* sugar, and is as hardy as a white oak tree; is sweeter than the Clinton, less so than the Concord.

Please remember that this Adirondac is grown in latitude 44 degs. North.

Yours truly, H. A. SHELDON.

With the above we received on the 22d. September, two bunches of the Adirondac Grape, not fully ripe but nearly so; a few days only would have perfected them. Had they been grown between the Highlands of the Hudson and New York, they would have matured several days ago. The grapes as received were sweet, tender, juicy, and in a condition that would bring the highest market price in this city. Judging from the sample sent, we should consider it a very valuable acquisition to our native grapes. Mr. Sheldon being an amateur, his opinion as given elsewhere is one free from the objections that are usually attached to the opinions of interested parties.

We have never seen the Lyman Grape, that and the "Adirondac" are the only varieties not to be found in our Vineyards. Three of the Editorial Corps of the "Horticulturist" are practical cultivators of the Grape, both in the open air and under glass, and every known variety is cultivated that we can obtain, the price of the "Adirondac" being more favorable this Fall, we shall probably indulge in One Vine a piece, then we can speak understandingly of all its merits.—(Eds.)

THE HORTICULTURIST.

VOL. XIX.....NOVEMBER, 1864.....NO. CCXXI.

HOMES FOR OUR CITIZENS.

IN our last number we pointed out to our readers certain attractive and desirable regions of the country, lying away from our cities, and yet accessible, which seem to us admirably adapted, in their various conditions, for summer resorts for the families of our cities who desire to withdraw from the sundry annoyances and inconveniences of a town residence during the warm season.

There is a large class of prosperous merchants, bankers, professional men, and wealthy citizens who have the tastes and means to command such enjoyments and luxuries as the country affords; who need the change in scenes, associations, employments and objects of interest, for themselves and their households, and who enjoy, with a keen relish, the seclusion, the comparative freedom from restraint, the pure, sweet air, the broad, open sunshine, and the numerous other rural advantages which are essentially denied them in their city homes.

In former years this class of people resorted, almost exclusively, to the sea-side, and to a few popular mineral springs, taking in, perhaps, Niagara in their transit, and rarely venturing into the wild and unexplored regions of Lake George. They re-

turned to town in the early days of September, with many a backward, longing look at the attractions and delights from which they reluctantly tore themselves away, and settled down again to the weary tread-mill of business. But for some years past this class has largely increased in number, and instead of confining themselves to their former resorts, they now seek the upper country, and prolong their stay into the glorious days of Autumn. Many of them have provided permanent summer homes, among the hills and on the lake or river shores. They have bought, and built, and planted, until they have identified themselves with the chosen spot, and as their trees have taken root in the fertile soil, so have their affections taken root in the beautiful country. They hasten gladly to these rural scenes with the opening Summer, and they leave them with regret when the exigencies of business require their presence in the city,—when the Summer suns have ripened the luscious fruits, and the flowers fade with the frosty kisses of the cold, and the passenger birds fly Southward. This class of our population is provided for. Their ample means assure them

a free choice of summer resorts, and adequate command of all the appliances of pleasant country living.

But there is another and still larger class of citizens who have neither the means to enable them to keep up both town and country residences, nor such command of their time that they can pass two or three months of every summer away from their business. There are thousands of clerks and subordinate officers in the banking and insurance institutions in our cities and in the large commercial houses; there are many merchants who are making their way slowly and surely to competence and wealth, who would gladly compromise for one-third of such a summer vacation. They are men of intelligence, and sometimes of a good deal of social and intellectual culture and refinement. Many of them were born, and their boyhood nurtured amongst the hills. They love the country with the intensity and purity of a first love, and they long for communion once more with nature in all her moods of loveliness. Their sweetest dreams still, when they forget the hard realities of life, are of green lawns and sloping hill-sides, of waving trees and cool streams. And they would wish that their children should become familiar with the same wholesome associations, and be moved by the same attachments and inspirations. In the city they are constantly exposed to its excitements, and subjected to the restraints of its artificial modes, with few outward influences to counteract upon their development; with very little, indeed, except the discipline and the affections of home to emancipate them from the tendencies to a trivial, artificial, and sordid life. They would gladly supply to them the healthful tone and vigor—the outer and inner bloom and freshness—which are the product of out-door life in the pure air of the country. But they are compelled by considerations of economy, to forego most of these advantages, and allow their children to grow up with city tastes and habits. They long for the country but think they must content themselves with the town, until the time comes

when their fortunes will enable them to command the coveted indulgences.

The time may come, sooner than they anticipate, when they will be obliged to choose the country. As far as New York city is concerned, it is simply a question of time, and it will require no long process of solution.

During the last forty years this city has increased in population with a rapid and uniform rate. Within the memory of persons now living, it has grown from an inconsiderable commercial town, until it has become one of the great cities of the world. This rapid stride and steady progress furnish us with the elements for calculating the period when the whole island will be covered with buildings, and there will remain no more vacant space for the use of its commerce, or the domestic accommodation of its citizens. There are statistics at hand which will demonstrate this, which we take from the *N. Y. Evening Post*.

Exclusive of the parks and other public grounds, the city contains 141,171 lots; of these lots 58,016 are already occupied by some kind of buildings, leaving 83,155 vacant, so, in round numbers, we have built upon three-sevenths of our available territory, while four-sevenths,—a little more than one-half—remain for future occupancy. With the present pressing demands for dwellings and the present high rates of rent, these vacant lots cannot long remain unoccupied. During the last four years comparatively few buildings have been erected—while the great demand for dwelling houses shows that our population has continued to increase, notwithstanding the comparative suspension of building operations. The population has evidently outgrown the capacity of the city to contain it, and it is a certain and well-known fact that even the present population has pressing need of more dwelling-houses, and must have them.

The population of the city, when our last census was taken in 1860, was 814,254, and at the present time it cannot fall much short of one million. If the remaining vacant lots were occupied by buildings, and the density of the population remained the

same as at present, it would add about twelve hundred thousand persons to the city. The entire population would then be a little more than two millions.

The regular growth of the city furnishes us a simple method to ascertain how long it will probably be before we shall reach that number, and every available lot in our city be occupied. We will arrange the census returns in tabular form, so that the reader may see at a glance the ratio of increase.

1820,.....	123,706
1825,.....	166,089
1830,.....	202,589
1835,.....	270,068
1840,.....	312,852
1845,.....	371,233
1850,.....	515,394
1855,.....	629,810
1860,.....	814,254

An inspection of this table will show that the ratio of increase, during each period of five years is about twenty-eight per cent. But for the purpose of our present estimate, we will put this increase at twenty-five per cent., and we shall then have the following results:

1865,.....	1,017,817
1870,.....	1,272,271
1875,.....	1,590,338
1880,.....	1,987,922
1885,...	2,484,902

It will thus be seen that the utmost limit of capacity will be reached before the year 1885, and that *within seventeen years there will not be a vacant lot upon the island*, and no structure can be erected without removing some existing building. New York will be a solid and compact city from the Battery to Westchester County.

If any of our readers are disposed to regard this as too short a period for such results, let them observe the progress of the last twenty or forty years. This city is not simply the commercial depot for the Empire State, but it is the distributing point for the commerce between the Old World and that immense country which is opening and growing upon this continent. It keeps

even pace with the quick and vigorous step of the nation, and is becoming the great metropolis of a people who are spreading over a whole continent, and who hold the control of the great staples of commerce. For many years to come we shall have a large surplus of food, cotton, and gold. The world must have these articles, and must take them from New York. The natural and immutable laws of trade will make our city take dimensions which have no limit but the commerce which has made and sustained it. Estimate the capacity of this continent to furnish gold, bread-stuffs, and raw material for manufacture for foreign nations, and then we shall be able to comprehend the far off and magnificent future of New York.

During the present century the growth and changes of population have shown that, by reason of the industrial and commercial pursuits carried on in the cities, the population increases in them more rapidly than in the country. In France, for illustration, from 1851 to 1856 there was a decrease in the number of those occupied in agriculture, of 2,928,803, and an increase of those employed in other industrial and commercial pursuits, of 3,518,476. In England, also, the cities have increased in population in a greater ratio than the country at large,—the cities doubling in thirty years, and the rest of England increasing but forty per cent.

In this country the rapid increase is more marked than in Europe. The fifty cities which have now a population of twenty thousand, and over, have increased from 1820 to 1860, more than seven fold, while the rest of the country has increased but three fold. Or if we make the comparison between the nine cities which have over 100,000 inhabitants, we shall find that the increase has been quite as marked. Their population in 1820, was 379,332,—in 1860, 2,521,833,—an increase of 2,142,501, while the increase of the whole population of the United States, during the same time, was 21,790,484. This tendency to concentration strengthens the expectation that this city will sustain its

present rate of growth, and gain its second million in as rapid a ratio as its first.

There is another consideration that justifies this expectation, and that is the general principle that population concentrates after periods of public disturbance. This was especially true of the continental cities after the wars of Napoleon. Paris, Vienna, Berlin, Munich, Frankfort, are notable examples. An old and new city is distinctly marked in each,—the new running over the boundaries of the old, and filled with elegant and expensive buildings. London, which increased in the whole of the eighteenth century only about 250,000 has added to its population since 1821, about 1,625,000, and this foreshadows the future growth of our own city. We stand now about where London did after Waterloo. The concentration of population, in our case, is aided by the increase of capital and business, and the development of the inexhaustible agricultural and mineral resources of our land. No city ever yet occupied so strong a position as New York. Equally accessible from all the maritime points of Europe; midway upon a coast stretching North and South, and receiving by easy water transit the productions of all climates from the tropics to the poles; and with a back country stretching westward across the continent, unequalled in resources, productiveness, and the energy of its population, and all finding here their market and metropolis, New York must remain the commercial, financial, and intellectual heart of the continent.

There are other considerations which will have an important bearing upon the future of our city to which we can barely allude. They are results yet to be attained, with few exceptions, but all of them we believe, within certain reach of the energies of our people. Among them we enumerate the Atlantic Telegraph—the one across the continent and through Siberia—the railway to the Pacific, and the new route to India and China—the development of river navigation, and manufacturing—the restoration of the Union, and of the productive indus-

try of the South, and the new lines of steamers which will supersede our old sailing vessels. These will affect New York as a metropolis, for she is to be regarded not only as a city by herself, but as having immense suburbs, as Brooklyn, Jersey City and Newark, which now contain not far from one half million inhabitants, not to mention Westchester County, Staten Island, the adjacent portions of Long Island, and the shores of the Hudson to the Highlands. The city has already overflowed into these dependencies, and the current will continue to run on with increasing force and fullness.

Meanwhile, the expenses of living in the city are increasing every year. Rents are higher now than ever before, and there is no prospect of their coming down for many years. For it must be remembered that when we begin our building operations again, we shall have to provide not only for the current increase in population, but for the deficiencies which result from the past four years or more, when comparatively few dwelling houses were erected. At the present time the rent of a convenient and respectable house, suitable to the requirements of a family having a fair income, and occupying a desirable position in society, is an excessive item of cost.

And the remedy for this is to go into the country. Along the lines of our railroads and navigable waters there are localities where land is comparatively cheap,—beautiful, healthy regions, where the comforts of a rural home may be secured, with all the advantages of society, and of religious and educational establishments and institutions. The facilities for reaching these country homes are already adequate for general purposes, and will be increased every year, as the demand for them grows. Railroads and steamboats are built and run for the purpose of profit on freight and passenger transportation. According to the general law of trade, the supply will equal the demand, and as the population increases along our lines of travel, the facilities and

accommodations for transit will be multiplied.

Why, then, should the man who loves the country, and possesses tastes and capacities for its enjoyment, and yet is compelled by circumstances to practice economy in his mode of living, be restrained to the city limits? It is quite a practicable thing for him to realize his wishes,—live in the country and enjoy its best luxuries, without abandoning the city as far as its commercial advantages are concerned. There are localities *within an hour* of the city hall, where land can be purchased at reasonable rates, and where all the advantages of health and beauty, of retirement, pure air and attractive scenery can be enjoyed for less money than he now expends in the narrow house in the crowded street, where every sense is offended—with no open sky or distant horizon tinged with the glories of the dying day or rising morn—no grassy lawns, or waving trees, or fragrant banks of flowers.

For such accommodations as he has, he pays, we will say, a rent of one thousand or twelve hundred dollars. In the country he might purchase two acres of land and build a cottage, which would afford him all, or more, conveniences than he now has, without the necessity of climbing up four or five flights of stairs—at an outlay, at the usual cost of building, not exceeding six thousand dollars. The interest on this sum would

be four hundred and twenty dollars. The difference between this amount and his present house rent would in a few years pay the whole cost of the place, and he would have a *home*—a centre and gathering place for his domestic interests and affections.

And this is no fancy sketch—no exaggerated statement of possibilities. We know of localities which can be reached from Wall Street in as many minutes as would be required to go to 50th Street, where land can be obtained for about five hundred dollars an acre, where there are all the conditions of health, good water, pure air, extensive and attractive views, and whatever else is desirable for a country home. In the direction we have now specially in mind, there are at least twenty railroad trains which daily stop at a convenient station, between the early morning and ten o'clock at night. For the ordinary purposes of business, and social intercourse, this is ample travelling accommodation.

We have already exceeded our usual limits, and we must close, but not before we add that for that class of our citizens whom we have had in view in writing this article, it will soon cease to be a matter of choice whether they live in the town or country. High rents in the city will send them into the country, whether they will or not.

[WRITTEN FOR THE HORTICULTURIST.]

THE GLADIOLUS.

BY EDWARD S. RAND, JR., BOSTON.

DURING the past season of burning heat and excessive drought which have dried up our perennials, parched or killed our annuals, and sadly diminished the bloom of our summer bulbs, no plant has held its own better than the subject of the present article. This new incentive to its culture was little needed to add to the merits of a plant, which during the last ten years has been steadily growing in public favor. It would be most difficult to name a plant

which is its superior in brilliant effect, delicacy and variety of color, and ease of culture. We can venture to predict that a very few years will find it indispensable to every garden, and superseding every other bedding plant for brilliant effect in masses. The above remarks apply only to our garden Gladioli, which are all hybrids from *G. natalensis* and *G. floribundus*, with a little of the blood of *cardinalis* and *ramosus* in some fine varieties; they are commonly

known in gardener's parlance as "Gandavensis hybrids" from the first hybrid raised, and differ much in habit and form from the more delicate and yet hardy European species, and the graceful and slender growing species of Southern Africa. Interesting as an article on these species might be, beautiful and almost unknown as many of them are, at present we can only say that they are mostly unsuitable for garden culture in our Northern States, requiring a greenhouse and much care to flower them in perfection. A descriptive list and colored figures of most of the finest may be found in Mrs. Loudon's *Bulbous Plants*. The name *Gladiolus*, from the Latin, is a true diminutive from "*gladius*," "a sword," and therefore means a little sword: its reference is to the shape of the leaves of the plant, and the same is found in the common name, "sword lily." The name is generally incorrectly pronounced "*Gladiólus*," with the accent on the "o"; following the analogy of the Latin, the word should be "*Gladiolus*," the accent on the "i," leaving the penult short; a far more euphonious word.

Gladiolus floribundus, or *oppositiflorus*, is a native of the Cape of Good Hope, and was introduced to English gardens about the year 1788. It is a well known species of easiest culture, and will, even in New England, sometimes survive the winter in the open ground. The best mode is to take up the bulbs, which are small, soon after the frost has killed the leaves, and preserve them in a cool dry cellar free from frost, until spring. The flowers are produced abundantly on opposite sides of the stem (whence the names) and are of a whitish pink with purple or lake markings.

Gladiolus Natalensis or *peittacinus* was introduced in 1829. It is a plant of sturdy habit, flowers scarlet and yellow, mottled; too well known to need particular description. Although a native of the hot region of Port Natal, it is often found hardy—and in England and some sections of our country is perfectly so; the bulb only requiring

to be surrounded by sand to prevent its rotting in the winter.

While *G. floribundus* is still commonly cultivated, *G. Natalensis*, having been long since surpassed in habits and color by hundreds of hybrids, is entirely neglected, and is rarely met with; and few indeed would imagine that the introduction of this now despised species threw the whole horticultural world into a fever of excitement, and that the bulbs commanded immense prices.

These being the original species the first hybrid was *G. Gandavensis*, so called from the town of Ghent. Its origin is obscure, the late Hon. and Rev. Wm. Herbert, the best authority on bulbs, declaring it impossible it should be a hybrid between the two species mentioned above, as with all his skill in hybridising he had never been able to cross those two species.

Be this as it may, certain it is that to *G. Gandavensis* we owe all our fine hybrids; this variety crossing freely with all other varieties, and some of the species; the seedlings sporting very much.

The color of the flowers of the variety is scarlet red, with deep or light yellow blotches on inferior petals; it is a showy plant, and although excelled by hundreds of seedlings is worthy of cultivation.

GENERAL TREATMENT.

The bulbs should be planted as soon as the ground is fairly dried in the spring, and all danger of frost is over. If deeply planted a surface frost does no injury. Plantings may be made every two weeks until the middle of June for a succession of bloom. Set the bulb from two to four inches deep according to the size (we have found deep planting advantageous in dry seasons) and cover lightly with pulverised soil free from stones, pressing it gently down with the palm of the hand. The plants will appear in about ten days, and only require to be kept free from weeds; a light hoeing occasionally is beneficial for keeping the ground open, and allowing air and moisture to penetrate. Do not water unless in very

severe drouth when the plants are dying; (except in the case of small bulbs which are often lost by drying up,) watering tends to bring both new bulbs and roots to the surface and is injurious.

When the plants are about four inches high they should each be tied to a neat, light stake, which should be of such a height as to allow the whole bloom of the spike to project above it; 2 feet 6 inches is a good length. As the plant grows and the flower-spike pushes, new ties should be given, as much danger is to be apprehended from violent winds or heavy rains. If we do not desire to save seed we should cut off the flower-stalk as soon as the bloom is past. When the frost has killed the leaves or before, if the leaves by turning yellow show the ripening of the bulb, the bulb should be taken up, dried *rapidly* in full sunlight, the new bulbs separated from the old, and the flowering bulbs (the stalk being cut off about one inch from the crown of the bulb) and the bulblets, (which on some varieties are plentifully produced,) put up in paper bags carefully labelled. During the winter the bulbs should be preserved in a dry cool cellar free from frost.

SOIL.

A rich light soil is best adapted to the plant. Our practice has been to dig into the beds late in the autumn a quantity of well rotted (at least two years) manure; cow manure is preferable to any other; then, in the spring just before planting, dig the bed again and pulverize the soil well. In a deep clayey loam with clay subsoil the plants seldom produce fine flowers; a gravel subsoil seems to suit the plant. Our finest beds are where was formerly a pitchpine wood.

SEED.

Most of the hybrids ripen seed freely, but no dependence can be placed upon its producing the parent, indeed for it to do so is the exception, and not the rule. As soon as the seed is ripe, which is known by the bursting of the capsule, it should be

gathered, and may at once be sown in a frame or green house, or carefully dried and preserved until the spring. The seed retains its germinating property about a year.

SEEDLINGS.

Almost every seed will produce a plant. If sown as soon as ripe, say in September, the plants soon appear, looking like small blades of grass; they should be rapidly grown in heat; about the first of March they will die down; rest should be given them by withholding water until about the first of June. The little bulblets which will be about the size of peas, should then be replanted in boxes about three quarters of an inch apart; water moderately; they will grow all summer, dying down about October, give a rest until January, then repot, an inch apart and grow until March; rest again until June, plant in beds of finely pulverized soil in the open air, and the larger proportion will bloom in September.

This rapid growth can only be attained where there are green house facilities. Ordinarily the seed is sown in a box or pot, set in a frame in the spring, the plants die down in the autumn, are wintered in the box in the cellar; the next spring are planted in a prepared bed and following the same process, bloom the third year.

PRESERVATION OF VARIETIES.

As a bulb worth five dollars, cannot in the dry state be distinguished from one worth five cents, great care must be taken to preserve varieties true to the name. For this the use of wooden labels with the name written in black lead, is to be discouraged, as aside from the danger of misplacing, the name is often rendered illegible by the weather. We have as yet seen no better way than our own, by which we have preserved some hundreds of distinct varieties without a mistake. The names are written with chemical ink on both sides of a zinc label; (such as are ordinarily sold for fruit trees,) these are attached to chestnut stakes two and a half feet long, pointed at

the lower end, and bored at the upper, by a zinc wire (iron rusts, lead is too pliable, copper eats the zinc.)

In planting we set the stake with the name attached when we plant the bulb; as the plant grows it is tied to the stake, and in autumn, stake and bulb come up together. When the bulb is dry enough to bag, the name from the stake is first written on the bag, then the bulb is cut off, cleaned and bagged; the stalk thrown away and the stake put away for the next year. All this takes time, and is troublesome, but the satisfaction of knowing that all varieties are true to the name, more than compensates. If this mode were followed by growers there would be no such general complaint as now exists, of poor kinds being imposed for good varieties. Our experience is that in this respect the most culpable carelessness prevails which yearly grows worse as varieties increase.

PROPAGATION BY BULBULETS.

We have said that seeds seldom produce the parent; how then can we multiply any variety in quantity? by bulbulets. When we take up the bulb in the autumn, we see at the base of the root more or less numerous, bunches of black or white hard bulbs, varying in size from a marble to a mustard seed. These, if we can get them to grow, produce the original variety. Collect these carefully, bag and label them and lay them aside for eighteen months, then sow them in the open border in a prepared bed; they will come up in ten days, not one will fail, and form bulbs which will bloom the next summer. If, however, you plant them the next spring after gathering (instead of keeping them over a season,) not one in a hundred will come up.

DISEASES AND ENEMIES.

A cold damp soil causing rot is the greatest difficulty in *Gladiolus* culture; this may be in a degree remedied by planting the bulb in sand. Rust is a disease of which the cause is yet unexplained; the whole plant turns a dirty spotted yellow,

and the bulb is found to be eaten with white spots. As soon as the disease is observed dig up the bulb and throw it away; it seems more prevalent in damp soils, appearing just as the plant shows bloom. A green cut worm often eats off the tender shoots in early spring; the only remedy is to examine the base of each shoot at night and kill the worm. The skin covering the bulb is sometimes infested with mealy bug—immediately burn every bulb so infested, let the variety be choice as it may.

MULTIPLICATION OF VARIETIES.

This is an evil which will soon be felt; all the world are raising seedling gladioli. At least one half of the seedlings, are equal to or better than old named varieties. Each grower names his favorites, and we are in danger of having a confusion of synonyms which will rival the palmiest days of pear culture. How this can be remedied other than by a *Gladiolus* convention is an interesting question.

We have said our native seedlings are better than named varieties; we have reason to rejoice it is so, and we see no reason for importing *Gladioli* when we can raise far better varieties than we can import.

VARIETIES.

The following are some of the finest varieties:

El Dorado, Solfaterre, Lord Campbell Vulcain, Pluton, La Quintanie, Rembrandt, Madam de Vatry, Goliah, Junon, Vesta, Sulphureus, Hebe, Goliah, Penelope, Calypso, Madam Binder, Mille Souchet, Mrs. Vilmorin, La Poussin, Count de Morny, Achille, Brenchleyensis Anatole Levanneur, Imperatrice, Ceres, Princess Clothilde, Osiris, Dr. Lindley, Napoleon III, Mars.

The following varieties are very poor and not worth growing except for massing:

Mon' Georgeon, Chas. Rouillard, Madam Pele, Mad' Paillet, Keteleerii, Mrs. Couder, Gil Blas, Roseus, Isabella, Burgraff d' Osterland, Mon' Blouet, Robert Blum, Charles Michel, Dr. Margolin.

These lists might be infinitely increased,

and the day is not far distant when a large proportion of imported named varieties will be thrown out of cultivation by American seedlings.

Glen Ridge, Oct. 1864.

RURAL CHURCH.

DESIGNED BY THE REV. DR. CRESSY.

THE plan for a RURAL CHURCH which we present to our readers this month, was designed by the Rev. Dr. Cressy, assistant minister of the Church of the Annunciation in this city. It is intended for a church which is to occupy a beautiful and commanding site on the western shore of Lake George, in the midst of the original forest. It will also meet the requirements of several correspondents who have requested plans for rural churches which could be erected as economically and cheaply as possible, with due regard to proportion, fitness and beauty of expression.



Fig. 1.—Perspective.

This design will be found to comprehend, we may say, in an eminent degree, variety of outline, correctness of detail, force of expression and purity of taste, with simplicity of execution, and in those parts of the country where lumber is abundant, and labor not exorbitant, it can be erected at a low cost.

We have a right to congratulate ourselves on the improvement which the last quarter of a century has witnessed among our people in the building and adorning of our edifices devoted to Christian worship.

Downing, in his time, said, "that the ugliest church architecture in Christendom, is at this moment to be found in the country towns and villages of the United States." And speaking of the influence of what our churches should be, in the beauty of their proportions, and in the expression of the sacred purposes which they embody, and the feelings of reverence and harmony with God and man which they suggest, he fitly says—"We fear there are very few country churches in our land that exert this kind of spell,—a spell which grows out of making stone, and brick, and timber, obey the will of the living soul, and express a religious sentiment. Most persons, most committees,

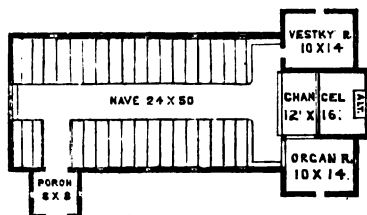


Fig. 2.—Floor Plan.

select men, vestrymen, and congregations, who have to do with the building of churches, appear indeed wholly to ignore the fact, that the form and feature of a building may be made to express religious, civil, domestic, or a dozen other feelings, as distinctly as the form and features of the human face:—and yet this is a fact as well known by all true architects, as that joy and sorrow, pleasure and pain, are capable of irradiating or darkening the countenance. Yes, and we do not say too much, when we add, that right expression in a building for religious purposes, has as much to do with awakening devotional feelings, and begetting an

attachment in the heart, as the unmistakable signs of virtue and benevolence in our fellow-creatures have in awakening kindred feelings in our own breasts.

"We do not, of course, mean to say that a beautiful rural church will make all the population about it devotional, any more than that sunshine will banish gloom; but it is one of the influences that prepare the way for religious feeling, and which we are as unwise to neglect, as we should be to abjure the world and bury ourselves, like the ancient troglodytes, in caves and caverns."

Happily we are coming to appreciate these truths, not only in our cities, but in the country, and the ugly, unsightly, and unseemly structures which have so long deformed the land are giving place to edifices in which the true ideas of harmony, grace, proportion, symmetry and expression, which make what we call Beauty, are brought out in due proportion.

The church we present is designed to be of wood, the country about the site affording an abundance of that material, at the lowest cost. An inspection of the design will show that the principal timbers of the frame are intended to be visible externally, —the weather-boarding being set back from the face of the posts and beams. This exterior covering is intended to be made of sound *rough* plank, from ten to fourteen inches wide, and at least one and a-half inches thick. These are to be tongued and

grooved, so as to make a close joint, and nailed to the frame in a *vertical* manner. The joint is to be covered with a narrow strip, or batten, of one and a-half inch plank. These unplanned plank may be painted with two good coats and sanded, or they may be left to take such tints and complexion as time and the weather may give them.

Lumber, at the proposed site, being cheaper and more easily obtained than lime, the interior of the church will be neatly ceiled with narrow boards, which will be lightly stained and oiled. The roof will be "open timber" of simple construction. All the wood work of the interior will be of pine, smoothly planed, stained and oiled, without paint, except the ceiling of the roof which should be colored, in order to give something like warmth of tone to the interior, the lack of which is often sadly felt in our country churches, particularly.

This mode of weather-boarding and "open timber" finish is now so common that a more particular description is unnecessary.

This church will seat, comfortably, about two hundred persons. Its cost will depend entirely upon the price of lumber and labor, of course, and these vary with different localities, and are particularly uncertain at this time. We will only add that it will cost no more to build with correct proportions and in good taste, than in disregard and defiance of these desirable and commendable principles.

THE IMPROVEMENT OF FLOWERS.

BY F. PARKMAN, JAMAICA PLAIN, MASS.

THE question is often asked, whence came the brilliant flowers of our gardens? They are not found in nature. Our roses, hollyhocks, pansies, dahlias, carnations are, in their natural types, though abundantly interesting, far inferior to the garden varieties both in form and color. The art of producing new varieties forms perhaps the most interesting department of flower culture, and, for the profit, not of the expert but of

the novice, we shall devote a few pages to it.

This art, like the improvement of the breeds of cattle or horses, is, for the most part, in complete concurrence with Nature and in furtherance of her design. Its processes may be called artificial, but the greater part are no more artificial than those which in the course of generations elevate the wild man to the man of civilization.

It must be admitted, however, that in one essential particular, Nature and the florist do not act in concurrence. We allude to the production of double flowers. In these, the stamens and pistils, the organs of reproduction, are changed wholly or partially into petals, or flower leaves, and when the change is complete, the flower becomes barren. A half-double flower, however, will often bear seed as well as a single one.

The processes of improvement may be divided into—First, Culture and Selection; Secondly, Hybridization. Give the plant, in the first place, the benefit of the circumstances of soil, exposure and general management most favorable to the development of its flowers. Watch them as they open, and remove every flower which falls short of the highest perfection of form and color of which the plant is capable. This should be done at once in order that the pollen of the imperfect flowers may not fertilize the rest, and for the same reason it is better that the plant itself should stand at a safe distance from other plants of the same kind. Where the bloom promises to be abundant, there is great advantage in removing some of the flower-buds as soon as they form; indeed nine-tenths of them may often be removed, thus causing the whole strength of the plant to centre on those that remain. By these means, we obtain a small quantity of seed, from the most perfect flowers and of the most healthy and vigorous quality. Sow it and raise plants from it. The chances are that some of the young plants will produce flowers superior in some point or other to those of the parent. Select one or more of the best and repeat the former process, raising seed from them with similar care and similar precautions. Hence another step in improvement; and so on until the plant has reached the limit of its possibilities. By these means, sometimes with and sometimes without the aid of hybridization, the pansies, phloxes, and other ornaments of our gardens have been developed in the course of years from their humble prototypes of the fields and woods.

As in races of men, so in plants, there are great differences in the capacity of development. Some improve rapidly, others slowly, others not at all. Some quickly reach their highest development, and refuse to be improved farther. Others display extraordinary caprices, "sporting" into new forms and colors and offering a fascinating field to the labors of the florist. Many most pleasing results have been produced by the patient and watchful development of these "sports." By some caprice of nature, a flower appears with a coloring distinct from others of its kind, and the florist seizes upon it as the basis of his operations, raising seed with a view to the development and improvement of this peculiarity, in other words, breeding for the point, as is done by breeders of Guernsey cattle. Sometimes the attempt fails, the offspring of the "sport" obstinately returning to the original and normal color; but usually there is more or less tendency in the sport to reproduce itself. Out of a hundred seedlings, one or two may display the peculiarity of the parent; or perhaps half may do so, or perhaps nearly all. Again, the florist chooses those in which the desired coloring appears most distinct and attractive, protects or removes them from the bastardizing influence of other flowers, gathers their seed, and raises a new crop. Here the chances are that the desired feature will again appear in greater number and better development.

It usually happens that, with every repetition of the process, the tendency in the sport to reproduce itself increases, so that with each sowing a large number of the seedlings show the peculiar stamp of their parentage. Sometimes, the distinctive character becomes completely "fixed;" in other words, all the seed will come true, not one of the seedlings reverting to the original type, and our floral riches will thus be increased by the addition of a permanent variety. The art of improving flowers from seed is one where chance shares equally with skill; and while a patient zeal in the

long run is sure of its reward, the hazards of the game maintain a pleasing interest throughout.

We have spoken of double flowers. The law which regulates their production—so far as any law can be distinguished,—is not always the same with that which applies when a perfect single flower is the object aimed at. By some freak of nature, a flower shows a tendency to double itself, that is to increase the number of its petals at the expense of its stamens. Our object is to encourage this tendency. To that end, far from increasing the natural vigor of the plant, we diminish it, cramming the roots into a small pot where they subsist on half rations. The seed saved under these circumstances from the partially double flower has usually a greater tendency to produce double flowers than that saved when the plant is in full vigor.

The exceeding diversity in the habits, tendencies, and caprices of flowers in respect to their functions of reproduction, the curious and sometimes very beautiful results proceeding from some unexpected freak of nature, and the possible advantages to be gained by dexterously turning this freak to account, while they open a wide field to observation and experience, give these floral pursuits an attractiveness which commonly

engages for life those who have once been enamoured of them. Amateurs have succeeded in them quite as well as professed cultivators. The needful requisites are zeal, patience, and a little leisure. He or she who can command a half hour each day need not despair of excellent results and will be certain of pleasure in pursuit of them. A routine of superficial culture is the bane of our suburban gardens. One who devotes his attention to a few favorite flowers, aims to do them full justice, makes himself acquainted with their habits and character and requirements, and if they are of sorts adapted to such experiments, seeks to develop and perfect them by the means briefly indicated above,—one in short who aims thoroughly to master one or more specialties of culture, will receive more pleasure and learn more horticulture than by superficially trifling with the whole field. There is no species of plant a thorough knowledge of whose culture does not involve principles applicable to vast numbers of plants. Well directed reading, with a special object in view, is of the greatest practical value. No practical cultivator of high standing will deny its advantages.

In another paper we shall have something to say of the processes of Hybridization.

LICHENS AND MOSSES.

THE Lichens constitute an extensive tribe of plants, exceedingly curious and beautiful in the simplicity of their structure, and very widely diffused. They consist chiefly of dry, hard, scaly crusts, without even the semblance of leaves or stems, except in a few species in which there are parts to which these names might perhaps be given.

The Lichens occupy almost the lowest position in the scale of vegetation. Their structure consists in a horizontal expansion which is termed a frond or thallus: a shield, or cap-like receptacle in which the sporules or seeds are contained; a sort of fruit stalk,

which is however only an extension of the thallus, and in some instances a sort of fringe of minute fibres, forming a kind of root. The fructification of the lichen is usually dispersed over the surface, in some cases apparently imbedded in its substance, and in others slightly elevated, and assuming the appearance of a bunch of diminutive brown or scarlet berries.

Doubtless the greater part of this tribe derive their nourishment entirely from the atmosphere, and the moisture it contains, for although some of them exhibit a number of hair-like filaments by which they fix themselves to the place on which they grow,

and which may possibly aid in the absorption of moisture, the circumstance of their flourishing on the most sterile rocks where there is not a particle of soil, is a proof that it is from atmospheric influences they are nourished and come to maturity.

Linnsæus fancifully gave the name of *Vernaculi*—bond-slaves—to the sea-weeds, but the lichens much better deserve it, for they seem as it were chained to the soil, which they improve for the benefit of other races of plants.

The mode in which these insignificant plants prepare the surface of sterile rocks for the reception and growth of higher species of vegetation is very remarkable. While the lichen is living, it forms a considerable quantity of oxalic acid, the materials for which—oxygen and carbon—are supplied by the atmosphere. This acts chemically upon the rock, especially the limestone, and forms hollows in which the detritus, both of the rock and of the decaying plant, remain. The moisture which is caught in these little wells sinks into the crevices of the rock, and when the frost comes and seizes on these particles of moisture, it causes them to expand, and thus breaks up the surface beneath which they lie into minute fragments, so continually adding to the forming soil. Age after age this process goes on, until at length the barren rock or the volcanic lava is found clothed with soil and converted into fruitful fields. The mosses follow the lichens, and then come the ferns and other tribes, and each one by its decay affording a richer and more plentiful soil to those that succeed.

There are many species of the lichen, and many of them vary greatly from each other. Some of them creep upon the surface of the earth, and spread over whole plains in the desolate northern regions. Others spring from the branches of the trees, and hang down from them like grey and matted beards. Some overrun old walls, and rocks, to which they give those soft and agreeable tints which render ancient ruins so pleasant to the eye. And others, again, establish themselves upon the bark of living trees,

and intertwining there, they form curious lines and figures which resemble the strange characters of some Oriental inscription.

The moss tribe is somewhat higher than the lichen in the scale of vegetation and more useful in the economy of things. But even the lichens are not without value, for many purposes, as we shall see by observing two or three species.

On the wood of some old gate or paling, you will see a dry, mealy crust of a bright yellow hue. This is the *candle-dying* lichen, so called by the Swedes, who use it to dye the candles which they use in their religious ceremonies. There is another of the lichens which is employed for a similar purpose. It is called, in the Scottish Highlands, the *Cudbear*. It grows there abundantly, and is used for dyeing woolen yarn of a purple color, for which purpose it is collected by the peasants and sold. It is a greyish substance and grows on rocks, from which it is scraped by the collectors with an iron hoop.

The *Clustered* lichen presents a bunch of dry, strap-shaped fronds of a grey and hoary appearance, and on close examination it will be seen that at a little distance from the point of each frond there will be one or two beautiful silver-like blossoms, so to call them, all clustered over with a delicate white powder.

There are many other kinds which will reward a careful examination, some yellow, others white, brown, grey, green, all clustering on the cold stone, or dry wood, and imparting to them a richness of coloring which would otherwise be wholly wanting.

There is a species called *Rock Tripe*, from some resemblance it bears to that article of diet, which supplies the Canadian hunter with food when none better is to be procured, and it is said to have been almost the only sustenance of the enterprising explorers, Richardson and Back, when they were out with Sir John Franklin in the Arctic regions. This species bears some resemblance to the *Iceland Moss*, which is a well-known lichen, from which an excellent and nutritious jelly is made.

This last named, as well as the *Stag Horn* and other lichens are abundantly eaten by rein-deer. The true *Rein-deer* moss is, however, one of the most important of this tribe of plants, as well as exceedingly beautiful in appearance. It is branched and hoary and grows several inches in height from the ground, the surface of which it often overruns for many miles in extent, and furnishes the chief part of the food of the rein-deer. Linnæus says there is no vegetable that grows so abundantly as this, "especially in woods of scattered pine where, for very many miles together, the surface of the sterile soil is covered with it as with snow. On the destruction of the forests by fire, when no other plant will find nourishment, this lichen springs up and flourishes, and after a few years attains its greatest size. Here the rein-deer are pastured, and whatever may be the depth of snow during the long Winter in that climate, they have the power of penetrating it, and obtaining their necessary food."

There is one other beautiful species of this plant which we will notice. It is the

common grey *cup-moss*, called by Gerard by the pretty name of the *Chalice-moss*. A little cluster of glaucous leaves first appears, from which spring ascending shoots, branched towards the top, the apex of each branch swelling into a little cup-shaped vessel, which might contain a drop or two of water. From the margin of these little receptacles, in the course of time, spring others like them, so that you have eventually a cluster of little cups raised on stalks, and growing on the edge of the original cup. When in fruit the seeds, which are scarlet, and formed on the edge of the cups, look like clusters of tiny bits of coral set in silver.

From what we have said it is evident that the study of even the lowest orders and species of the vegetable kingdom is full of interest and inspiration to the thoughtful, while the devout will not fail to find, in every investigation of His works, from the minutest to the most exalted and sublime, new and impressive evidences of the skill and wisdom of Him

"Who planned and reared, and still upholds a world
So clothed in beauty."

THE BROAD-LEAVED EVERGREENS.

BY AN OLD CONTRIBUTOR.

MESSRS. EDITORS: Few pages of the HORTICULTURIST interest your amateur readers more than those devoted to the introduction of *Rhododendrons*, *Kalmias*, *Hollies*, and *Mahonias*. When we read of these plants as the favorite adornment of English home-steads, and when we see many of them growing wild in our own country, in splendid luxuriance, one cannot but ask himself why they may not be introduced into our own gardens and pleasure grounds. That the attempt has been made, and with only partial success, many of your readers well know.

The history of such endeavors, in Central New York, has been about as follows:—Plants of American *Holly* and *Kalmia latifolia* and *Rhododendron Catawbiense* have been bought, at different times, from the Eastern nurseries, and set out in ground prepared

as directed in the books, viz.: One-third muck, one-third sand, one-third common soil; the whole trenched and worked together, eighteen inches or two feet deep. The beds have been partially shaded on the south side by tall screens of arbor vitæ. In the winter, evergreen boughs have been stuck in around the plants, to protect them from severe winds and sudden changes of temperature. During the first year these plants have done well, the *Kalmias* and *Rhododendrons* making a moderate show of blossoms. But in the second year, they have mostly drooped and failed to flower; in the third year, they have drooped still more; and thence after, if they have managed to live, it has been only to show that something was wrong in their condition, and to dishearten and mortify the owner. The *Holly* has done no better. *Azaleas* of

several sorts do pretty well; the *Prinos glaber* holds its own; and *Mahonia aquifolia* does best of all. The *Rhododendron maximum* has also been tried, and with much better success than *Rhododendron Catawbiense*. The leaves and flower-buds go through the winter quite bravely, and endure the heats of mid-summer very well. Did this species only furnish us as great a variety and beauty of blossoms as the *Catawbiense*, we should be content.

It is perhaps not known to all of your readers, that the *Rhododendron maximum* is indigenous in this part of the State. Dr. Gray speaks of it as found in "damp, deep woods, sparingly, in New England, New York, and Ohio, but very common along shaded water-courses in the mountains of Pennsylvania and southward." The *Catawbiense*, he says, belongs "on the summits of the Alleghanies, Virginia, and southward." It is not, therefore, surprising that the first should prove a little the hardier of the two.

One of the few native habitats of the *Rhododendron maximum*, in this State, lies about four miles north of this town. The land, for some distance around it, is low, swampy, and comparatively barren. The forests are composed of scarlet maple, birch, black ash, elm and hemlock. Entering the wood from the north side, and stumbling over fallen trees, and winding through dense thickets, you come to an open area, eighty or one hundred feet in diameter, in the centre of which is a mass of *Rhododendrons*. There appears to be a central group of several plants, which throw up some of their shoots ten or fifteen feet high, and spread out others over the ground about the same distance. Around this central mass, young plants have sprung up, both layers and seedlings. This group stands on a sort of hummock, or low mound of peaty earth, partly surrounded by water. On the south side, it is open to the sun, or but slightly shaded by an ash tree. To a lover of this family of plants, the sight is truly splendid. It is a great towering mass of broad, glossy, luxuriant leaves, enlivened by hundreds of

plump flower-buds, nearly as large as butter-nuts.

This thriving grove of native *Rhododendrons* shows us two or three things, viz.:— that the *Rhododendron maximum* is perfectly hardy in the climate of central New York; that its favorite soil is a moist muck or peat; and that while it does not suffer from exposure to the sun's rays on the south, it likes to be protected from the winds by a girdle of foliage on the north and west sides. So, doubtless, whoever will supply these conditions artificially, can grow this plant in the same latitude to his perfect satisfaction.

But what can we do with *Rhododendron Catawbiense*? It gladdens our eyes on visiting your Central Park in June, to see its masses of these plants and of *Kalmias*, in such vigor of growth and splendor of bloom. Surely, you can grow them well. Mr. Sargent, also, at Fishkill, succeeds with them; as do the amateurs around Boston. What is the cause of our ill-success? Are we a little too far north? Does our soil contain some hurtful ingredient? Don't we trench our borders deep enough? Perhaps the trees with which we encircle our beds send their roots among the *Rhododendrons* and rob them of their food and drink. We, however, strive to guard against this, by cutting off those roots every Spring. It seems plain that this family of plants needs a good degree of moisture at the roots, and that permanently.

Mr. Editor, there is no question, not even that of the grape, in which gardeners and planters feel a deeper interest than this.

If you can teach us how to grow successfully these finer sorts of the broad-leaved evergreens, you will do us a most excellent service, and we will build you a monument.

It is a matter of rejoicing that the horticulturists around Boston have taken up this matter in earnest. Mr. Hunnewell's premium to encourage the introduction of these and kindred plants, speaks well for his intelligence and liberality. Cannot something as good be done in this State? G.

Clinton, New York, Sept. 1864.

THE SHELDON PEAR.

A FRUIT of first quality, succeeding best bearer. An American seedling raised by on the pear stock. Tree, hardy and a good Mr. Sheldon, of Penfield, Wayne County,

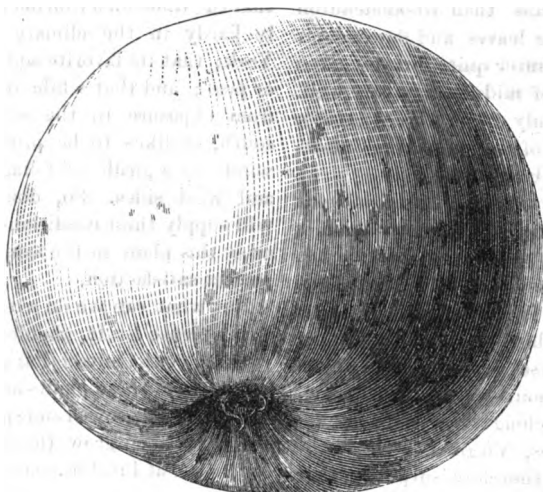


Fig. 1.—Sheldon Pear.

N. Y. Fruit Bergamot shaped, skin, a fine russet color. Stalk short and stout, inserted in an uneven cavity. Calyx small, set in a round, narrow basin. Flesh melting,

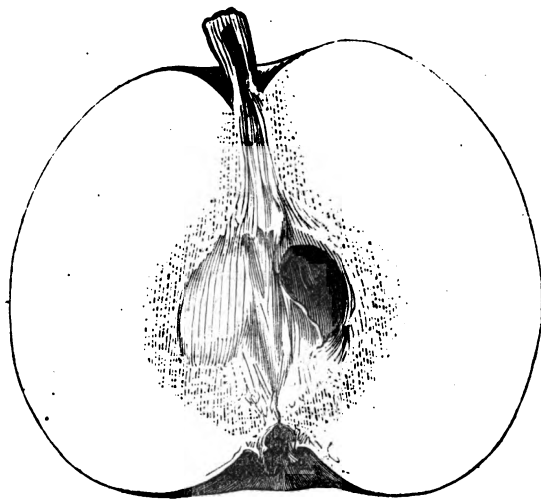


Fig. 2.—Section.

juicy, with a very brisk, vinous, highly perfumed flavor. Season, October. This fruit is in high favor among cultivators, and all should add it to their collections as one of the very best.

OCTOBER.

BY WM. BACON, RICHMOND, MASS.

BEAUTIFUL October! Month of Golden cornfields, melting fruits and russet forests! Rich charms are thine, though thou closest the season of ingathering of the fruits of the earth, and deckest the fields and the woodlands with vestments of decay, and by the nakedness of thy waning days thou heraldest the sure approach of unrelenting winter. We love thee for the harvest of field and orchard that thou droppest from thy lap. We admire thee for the rich scenery thou spreadest along thy path. Beauty and goodness are sweetly combined in thy attributes. Lessons of instruction are given by thee from thy incoming to thy outgoing. Thou teachest us the ample provisions that nature makes for her own preservation through the season of frosts and storm. The tallest trees at thy bidding lay aside their dense, and in its season cool and refreshing foliage, to give free passage to angry winds as they come down tempestuously to rustle through their branches. Lesser and more delicate plants shrink entirely from the touch of winds and gathering their life-blood into their roots, lie nestling quietly in the earth till the storms have passed away, and the season has returned to awaken them to new life and vigor.

The season of rest to plants is the season of improvement to those who cultivate them. We cannot well, in the season of their growth and vigor, remove them to beautify our grounds or give them a place in our gardens and orchards, to yield us beautiful and health giving fruit. It may be done, we admit, but at a vastly increased amount of labor and risk. And so this season of rest to them is a matter of encouragement and help to all who would cultivate them.

WHEN SHALL TRANSPLANTING BE DONE?

It may be done with good success at any time in the period of the rest of plants. When it can best be done is a matter not yet fully settled, different persons preferring

different seasons. Some prefer autumn for setting out, others think spring the most favorable season. I have seen an orchard in full bearing, which was set out in winter. Either of the seasons, autumn or spring, is good. Which is best, depends on circumstances. South, where the seasons are of full length, spring may have superior advantages, but in the north, where spring is so short that we almost step from winter to summer—from snow drifts or mud into harvest fields—when there is much labor that must be done, and but a few days to perform it,—where long pleasant autumns in a measure counterbalance the shortness of spring, and give an opportunity to do much, that might otherwise become the labor of spring, we are fully of the opinion that autumn is the best time for the operation, of hardy trees and shrubs.

In addition to the fact, that autumn is a season of greater leisure from the labors of the field and garden, comes up an additional *why* in the fact, that in many localities the soil is for a much longer period in good workable condition in fall than in spring. It is of little use to set trees or vines in a wet soil, or when the soil is burthened with excessive moisture. Many places have clay in such preponderance that dryness comes late in the spring. When trees are set in such soils, it becomes so compact about their roots that it retards the throwing out of roots, and thereby checks their growth. Indeed, it inflicts a permanent evil upon them, for if it once settles down in brick-like compactness about them, it will remain like brick until it has been pulverized by artificial means. No rains or sunshine, frost or dew will ever decompose it, to make it a suitable lodgement for their roots. Nothing but a thorough overhauling and pulverization will ever make it so. And who would ever think of going through that process after a tree is planted? a process

which, in point of fact, would amount to taking up and replanting.

To counteract this evil then, we, for many localities, prefer fall for transplanting most trees and hardy plants. And the earlier in autumn the work can be done the better, provided the plant has done its work for the season, and ready for the repose that nature provides. As soon as the leaf falls or the stalk decays let the work be done, and well done. The earlier under these circumstances then the better, for the earth is in the best condition for warmth and dryness, and can be placed most naturally

around the roots, while at the same time it will assume a more natural and protective position before the setting in of winter. The interstices of the roots will receive it in its mellowness instead of being clogged with mud or left in vacuum through the winter, and the tree, if well planted, will be ready to "go ahead" in the spring with nearly as great facilities as though it had never been removed. And so, October, with its rich harvests, beautiful scenery, cool nights and noontide heats, comes to us inviting earnest and successful labors.

THE ADIRONDAC GRAPE.

BY F. C. BREHM.

IN reply to Mr. Bailey's article in September number of *HORTICULTURIST*, on the Adirondac Grape, and for the benefit of others who desire to know more about this grape, I would submit the following: First, Mr. Bailey claims that my case of reported mildew is the first he ever heard of. To satisfy him that it has mildewed in other places, I will give an extract from a letter I received yesterday from Bridgeport, Connecticut, asking information about the Adirondac, in the following manner: He says, "Do you think the Adirondac is hardy. We bought a number of them, planted one out, it grew two feet the first year, mildewed so badly that it ripened only three inches of wood; this year ripened ten inches of wood, but the leaves are all gone with the mildew, while the Concord, Hartford Prolific, and Rogers' Hybrids are not affected by it; it mildews in the house as well as outdoors." This is from a nurseryman of Bridgeport, Connecticut. If Mr. Bailey will take the trouble to look around a little he can find plenty more such cases. Second, he claims the Adirondac is two weeks earlier than the Delaware. This I claim is not so; as not only did the Adirondac fail to ripen entirely, but Mr. Bailey admitted to me himself, at the State Fair, at Utica,

last Fall, Sept. 16th, 1863, that the Adirondac was not quite ripe yet, that he was showing, while I had Delaware grapes on the exhibition tables that were ripe, and grown without any protection whatever in open vineyard, and have at the present time, September 9th, 1864, any quantity of ripe Delaware grapes; also, Israella, Hartford Prolific, and Rogers' 19. Thirdly—As to hardiness, Mr. Bailey is very careful not to say anything about it, except in his advertisements where he cracks it up as being perfectly hardy, extremely early, &c. As to the hardiness of it, I determined to try it and see if it would stand our Winters, accordingly I cut it back to within 18 inches of the old or previous year's growth, where the wood seemed sound and ripe, and left it out along with Delaware, Clinton, Concord, Hartford Prolific, and Rogers' Hybrid, 19. In the Spring following they all started and made a vigorous growth, with the exception of the Adirondac which was frozen to the old wood, and nearly killed. At first I thought it was killed, root and branch, but after a month it pushed two buds which made a feeble growth, and at present appearances will not ripen its wood. These are facts and can be proven, word for word, and if it is not gulling the people, when

men advertise a grape as hardy, healthy, extremely early, and first quality, when it is neither of these; then I would like to know what gulling is?

The Adirondac is, in my opinion, a local grape; it may do well where it originated, but it will not do here, nor will it do for general dissemination, as those will find to their sorrow who are foolish enough to

try it; as I said in my first article on the Adirondac and Delaware grapes. I should not have made these statements public but for the persistent efforts to sell the unwary and those not posted, and I considered it my duty to the horticultural community to expose this humbug.

Waterloo, N. Y., Sept. 9, 1864.

THE SEASONS—SEPTEMBER.

BY C. N. B.

Definite are the characteristics of September. There is warmth at mid-day, but cool are the mornings, often chilly; and variable winds, precursors of the equinoctial gales, sweep through the woods with a deep mysterious resonance, like that of the rolling sea. The tall trees bend, and the branches wave to and fro. Clouds gather and disperse, and gather again; and sudden showers accompany rough gusts of wind driving across the Atlantic.

The harvest is over the fields which were lately a waving expanse of grain are now covered only with stubble; the reaper has done his work, and the plowman has begun his labor. And yet, September is not without its pleasant days—it is a refreshing month after the glowing heat of August. It is the month of Pomona rather than Flora; not that there are no flowers, for the garden is gay with the perpetual rose, the phlox, china aster, the fuchsia, the hollyhock, the dahlia, the chrysanthemum, the scarlet geranium, and many more which linger long, as loath to yield, till subdued by freezing blasts of winter. The bitter-sweet, a clinging plant, is still in blossom, while bunches of glossy scarlet berries show that its true flowering time is over, and that these are but a feeble effervescence—a last effort. Red are the leaves of the Virginia creeper, companion of the bittersweet, a graceful tendril-armed plant, winding around and up the trunk of oak or elm. Red also are the honey-suckles, the fragrant

bower plants. Yes, September is the season over which Pomona presides. The cider-press is crushing the ripe ruddy apple; and the clustering grapes are ripening.

And now, too, the insect tribes display indications of an altered state of things in their general economy. As the weeks pass by, less and less numerous are the butterflies on the wing; less are the night-fitting moths; caterpillars are seeking nooks and crannies in which to assume their first stage of transformation—the chrysalis formation,—some in silken cocoons awaiting their final change, some naked and suspended; others buried in the earth, or in the centre of time-worn mouldering trees; and not a few in the crevices of the bark, or between the bark and the softening timber. But the bee is still busy. In orchard and garden, the geometric spider, an industrious weaver by night, spreads her nets of radii and ex-centric circles, with long lines of rigging stretching from tree to tree, or from bush to bush, across our foot-path. We have all heard of the gossamer spider, the aeronautic spider, that on flimsy threads mounts high into the atmosphere, sailing over tree and tower, myriads floating aloft, the prey of the swallow and the martin.

There is a movement among the feathered tribes; there is general preparation among summer visitors for departure, the symptoms of which are more decided as September approaches to October.

The swallows left us in August. The

bobolink is now in haste to follow, and so is the robin.

The bobolink, or reed-bird, as it is called in Pennsylvania, and rice-bird at the South, is one of the choicest delicacies for the table. It is fat in October; small insects and rice are its food.

Hark! The sharp report of the double-barreled rings in our ear. On whirring wings a startled covey of partridges hurry off to a distant spot, the extent of their flight depending upon the more or less perfect moulting of their primary wing-feathers, which is generally completed by the end of October. In August, the sportsman

was toiling through the tall weeds and cornfield, bent upon destruction of the wood-cock. He brings with him his keen-scented Spaniel, or high-bred, well-trained pointers, staunch dogs, true to their point—standing steadily.

September and October are the sportsman's months. There is wood-cock shooting in the cornfields; and then too we receive our first of wood-cocks, which resort to brakes of birch and underwood, to thickets bordering the wood, and to jungles overshadowing oozy ground or miry spots intersected by sluggish creeks, pools or ditches. So September passes into October.

HOW TO MAKE A PARADISE IN THE COUNTRY.

BY THE AUTHOR OF LETTERS FROM UNDER A BRIDGE.

LANDSCAPE-GARDENING is a pleasant subject to expand into an imaginative article, and I am not surprised that men, sitting amid hot editorials in a city (the month of July,) find a certain facility in creating woods and walks, planting hedges and building conservatories. So may the brain be refreshed, I well know, even with the smell of printing ink in the nostrils. But landscape-gardening, as within the reach of the small farmer people, is quite another thing, and to be managed (as brain-gardening need not be, to be sure) with economy and moderation. Tell us in the quarterlies, if you will, what a man may do with a thousand acres and plenty of money; but *we* will endeavor to show what may be done with fifty acres and a spare hour in the evening—by the tasteful farmer, or the tradesman retired on small means. These own their fifty acres (more or less,) up to the sky and down to the bottom of their "diggings," and as nature lets the tree grow and the flower expand for man, without reference to his accounts at the bank, they have it in their power to embellish, and most commonly, they have also the inclination. Beginners, however, at this, as at most other things, are at the mercy of injudicious coun-

sel, and few books can be more expensively misapplied, than the treatises on landscape-gardening.

The most intense and sincere lovers of the country, are citizens who have fled to rural life in middle age, and old travellers who are weary, heart and foot, and long for shelter and rest. Both these classes of men are ornamental in their tastes—the first because the country is his passion, heightened by abstinence; and the latter, because he remembers the secluded and sweet spots he has crossed in travel, and yearns for something that resembles them, of his own. To begin at the beginning, I will suppose such a man as either of these, in search of land to purchase and build upon. His means are moderate.

Leaving the climate and productiveness of soil out of the question, the main things to find united, are, *shade, water, and inequality of surface*. With these three features given by nature, any spot may be made beautiful, and at very little cost; and, fortunately for purchasers in this country, most land is valued and sold with little or no reference to these or other capabilities for embellishment. Water, in a country so laced with rivers, is easily found. Yet there are hints

worth giving, perhaps, obvious as they may seem, even in the selection of water. A small and rapid river is preferable to a large river or lake. The Hudson, for instance, is too broad to bridge, and beautiful as the sites are upon its banks, the residents have but one egress and one drive—the country behind them. If they could cross to the other side, and radiate in every direction in their evening drives, the villas on that noble river would be trebled in value. One soon tires of riding up and down one bank of a river, and without taste for boating, the beautiful expanse of water soon becomes an irksome barrier. Very much the same remark is true of the borders of lakes, with the additional objection, that there is no variety to the view. A small bright stream, such as hundreds of nameless ones in these beautiful northern states, spanned by bridges, at every half mile, followed always by the roads, which naturally seek the level, and winding into picturesque surprises, appearing and disappearing, continually, is in itself, an ever renewing poem, crowded with changeable pictures, and every day tempting you to follow or trace back its bright current. Small rivers, again, insure to a degree the other two requisites—shade and inequality of surface—the interval being proportionably narrow, and backed by slopes and alluvial soil, usually producing the various nut and maple trees, which, for their fruit and sap, have been spared by the inexorable axes of the first settlers. If there is any land in the country, the price of which is raised from the supposed desirableness of the site, it is upon the lakes and larger rivers, leaving the smaller rivers, fortunately still within the scale of the people's means.

One more word as to the selection of a spot. The rivers in the United States, more than those of older countries, are variable in their quantity of water. The banks of many of the most picturesque, present, at the season of the year when we most wish it otherwise (in the sultry heats of August and September), bared rocks or beds of ooze,

while the stream runs sluggishly and uninvitingly between. Those which are fed principally by springs, however, are less liable to the effects of drought than those which are the outlets of large bodies of water; and indeed, there is great difference in rivers in this respect, depending on the degree in which their courses are shaded, and other causes. It will be safest, consequently, to select a site in August, when the water is at the lowest, preferring, of course, a bold and high bank as a protection against freshets and flood-wood. The remotest chance of a war with water, damming against wash and floods, fills an old settler with economic alarm.

It was doubtless a "small chore" for the deluge to heave up a mound or slope a bank, but with one spade at a dollar a day, the moving of earth is a discouraging job, and in selecting a place to live, it is well to be apprized what diggings may become necessary, and how your hay and water, wood, visitors, and lumber generally, are to come and go. A man's first fancy is commonly to build on a hill; but as he lives on, year after year, he would like his house lower and lower, till, if the fairies had done it for him at each succeeding wish, he would trouble them at last to dig his cellar at the bottom. It is hard mounting a hill daily, with tired horses, and it is dangerous driving down with full bellied ones from the stable-door, and your friends deduct from the pleasure of seeing you, the inconvenience of ascending and descending. The view, for which you build high, you soon discover is not daily bread, but an occasional treat, more worth, as well as better liked, for the walk to get it, and (you have selected your site, of course, with a southern exposure) a good stiff hill at your back, nine months in the year, saves several degrees of the thermometer, and sundry chimney-tops, barn roofs, and other furniture, peripatetic in a tempest. Then your hill-road washes with the rains, and needs continual mending, and the dweller on the hill needs one more horse and two more oxen, than the

dweller in the valley. One thing more. There rises a night-mist (never unwholesome from running water), which protects fruit trees from frost to a certain level above

the river, at certain critical seasons, and so ends the reasons for building low.

TO BE CONTINUED.

PROPAGATING VINES.

BY J. F. DELIOT, SING SING, N. Y.

SOME say the vines raised under glass are not so hardy as those raised out of doors, that is a mistake; some others say they would not plant in the fall, vines raised under glass because they think the winter would kill them, another mistake; here is the reason: The vines raised under glass do not suffer for anything, they have all they need from the beginning to the end, they do not suffer from the drouth, neither from too much water, the growth through the summer season is regular, it must be healthy, they do not feel the first cold night in September, sometimes a little frost to kill their leaves, they grow right along until the wood is perfectly ripe to the top, and the leaves fall by themselves, because they cannot do any more good, the wood, being hard and ripe. If you feel the wood of such vines you will find it very hard. I suppose every one will admit that if the wood is ripe to the top, and being hard, the roots will be ripe to the end, and will be hard too; now if the wood and roots are perfect, how will they freeze in winter? Take the wood of such plants, good plants, mind that, and propagate with it, you will have better plants than if you propagate with wood four times larger grown out doors, and will grow healthier; that proves there is something solid in it.

Now we will see about those raised out doors, or raised under glass and planted out doors in the summer: First, if you plant some vines out doors, raised under glass, they must be good and healthy before taking them out, and if they are planted as early as June, they will make strong plants, they will grow larger plants and larger

roots than if they had remained in the green house, but the leaves will fall before the wood and roots be ripe, and they will not be perfect; some time in September the cold night or little frost comes when the vines are in full growth, the vines, three to six feet of wood when the first frost comes, is not more than six inches to two feet ripe wood, some times more, but I have seen many times less, all the rest is green, and will remain green because the frost has killed the leaves. Now everybody will admit with me that, if the wood is not well ripened the roots will not be ripe. Now if the roots and wood are not ripe how can they be hardy? I do not say they are not good plants for that, but I say the plants raised under glass, with good management, are harder and hardier, and will grow better than those grown out doors, and if you take out-door wood to propagate with, few only will grow, and what will grow will not make good plants, because the wood is not perfect. In my opinion, it is safer to plant the vines raised under glass, in the fall, than those grown out doors. In speaking about propagating vines with small wood, that makes me think of some one saying if the vines are not propagated with big, bearing wood, the young plants are worthless, they do not bear fruit, and do not grow so strong, I say, emphatically, that is humbug. I know, by my own experiments, those who write or say such nonsense will only try to make believe they know something. When you buy grape vines look at the roots, if you see them healthy and ripe, do not mind how and what kind of wood they were propagated with.

EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Address all Communications, for the Editorial and publishing departments, to GEO. E. & F. W. WOODWARD, 37 Park Row, New York.

ONE more number, that for December will complete the 19th annual volume of the *HORTICULTURIST*, and with that will expire the subscriptions of many of our readers. In renewing for the new volume, we hope all will endeavor to obtain for us at least, one new subscriber. New subscribers for 1865 will receive all numbers this year, issued after receipt of the money. The volumes for 1863 and '64 bound in one, and numbers for 1865 at the premium price of FIVE DOLLARS, we commend to all new readers; together they contain 1,200 royal octavo pages of reading matter, and nearly 500 original engravings.

WE have in type, a little too late for this number, an article on Dutch Bulbs, from the pen of Edward S. Rand, Jr., author of *Flowers for Parlor and Garden*, and whose article on the *Gladiolus* in this issue deserves the attention of our readers. Mr. Rand will contribute frequently to our columns during the ensuing year.

VOLUME 1858 WANTED. If any of our readers can obtain for us a copy of the volume for 1858, and send it to this office, we will send them the *HORTICULTURIST* for 1865 and 1866, and our thanks. We can supply a few volumes for 1854, 1855, 1856, and 1857, price \$2.50 each, bound and post paid. 1859, 1860 and 1861 are nearly all gone.

MR. C. M. SAXTON, well known in this city and throughout the land as the popular publisher of *Agricultural and Horticultural books*, and for some years publisher of this *Magazine*, has decided to make his future home in the "glorious west." He leaves us for St. Louis, to become the western

agent of Mason & Hamlin's Cabinet Organs, and we congratulate our St. Louis friends on this accession to their enterprising business men. His old love for the *HORTICULTURIST* still remains as strong as ever, and he will act for us in extending our circulation in the valley of the Mississippi. We commend him to the attention of our readers as a genial hearted gentleman, a popular speaker, and a valued friend.

PRESERVED FRUITS.—We have received from the Oneida Community, Oneida, N. Y., a box of one dozen samples of their preserved fruits, which exceed in beauty and flavor anything we have heretofore seen of this description. The Oneida Community at Oneida, consists of, we believe, about eighty persons, owning in the neighborhood of three hundred acres of land. Their principal pursuit is Horticulture, though they include other branches of industry. 'Whatever they do, *they do well*, and their reputation' is such that the demand from their immediate vicinity, for all articles and products for household use exceeds the supply. We understand, however, that they are constantly increasing their facilities, and intend opening an agency in this city. Let the character of their fruit once become well known here, and it will trouble them exceedingly to keep this market supplied. A really fine and beautiful assortment of fruit put up in the same cleanly, honest manner as that sent us would be in great demand, for New Yorkers *will have* that which is showy, elegant and first class, no matter what the price may be.

NEWBURGH BAY HORTICULTURAL SOCIETY.—The fourth annual exhibition of this society opened at Newburgh, September

29th, and continued for three days. This society though young in years has made rapid strides, and now enjoys an enviable reputation for its horticultural displays.

The great feature was as heretofore the native grapes, for which this society has become justly celebrated. We have never seen it surpassed elsewhere. All the old standard varieties were shown, as well as numerous new candidates for public favor. Fine specimens of Isabella, Catawba, Diana, Delaware, Adirondac, Creveling, Allen's Hybrid, Cuyahoga, Rebecca, Heribmont, Hartford Prolific, &c., were upon the tables, which were so completely filled that there seemed no room for another plato. One collection of native grapes contained several plates of fine specimens of Montgomery grape. The judges should have ruled this out, and allowed it to take its proper place among foreign grapes grown in the open air. Foreign grapes were not so well represented as they should have been, though the collections were fine, they were not numerous enough; those of Mr. Green and Mr. Ricketts particularly attracted attention. Apples and pears were shown in large numbers. C. Downing, T. B. Shelton, O. S. Hathaway, W. H. Armstrong, Wm. Johnson, D. A. Morrison, and others, exhibited fine collections. The Sheldon, Dix, Glout Morceau, Beurré, Clairgeau, Seckel, Louise Bonné de Jersey, were large, well grown and exceedingly attractive to the eye.

The display of vegetables was good and well arranged. Carrots, beets, onions, cauliflowers and mammoth egg plants appeared to much advantage.

The flower department deserves more attention than it has received at the hands of the society. Much interest is added to an exhibition by a fine display of flowering plants in pots, as well as cut flowers in profusion, which the residents of Newburgh Bay, have in their power to exhibit. We hope for an improvement in future. Messrs. Brinkerhoff & Co. exhibited a fine collection of plants with ornamental leaves. Be-

gonias, Crotons, Caladiums, Cissus discolor, Pandanus, and others, also Boquet Dahlias. Fine large specimen plants of Heliotrope, Scarlet Geranium and Lantanas perfect in shape, and masses of bloom, deserved and received much praise.

Bouquets of cut flowers were numerous and well arranged. Mrs. Downing's Autumn leaves and ornamental grasses were a feature; the noble plumes of the Pampas grass in the latter gave much grace to the bouquet. Inclement weather for two days prevented many from attending, but we understand that the exhibition was peculiarly successful.

We annex a list of some of the prizes awarded: For the best basket of fruit to J. H. Ricketts; second to T. H. Roe, third to W. D. Humphries.

For best collection of apples, O. S. Hathaway; second to Wm. Johnson, gardener to H. Ball. Best dish apples, W. H. Armstrong, second, N. D. Brown. Best collection of pears John Peattie, gardener to Mrs. W. Kent; second to Wm. Johnson, gardener to H. Ball; third to H. Cornell.

For best collection of Hardy grapes to A. J. Caywood. For best five varieties Hardy grapes, to Wm. Johnson; second to A. Palmer; third to H. W. Murdfeldt.

For best five varieties Foreign grapes grown under glass, to J. H. Ricketts; second to Thos. Wade, gardener to General Van Allen; third to D. Brinkerhoff & Co.

For best collection of peaches, C. Downing. For best plums, to W. L. Findlay. For best collection of vegetables, Thos. Ayres, gardener to W. L. Findlay.

We have purchased from Mr. C. M. Saxton, a portion of his stock of Agricultural and Horticultural books, and shall hereafter keep for sale at this office, or mail, post paid to any address, on receipt of publishers' prices, all the leading works on Agriculture, Horticulture, Architecture, Landscape Gardening, &c., or obtain and forward in same manner, any publication on other subjects. We have also taken the New York Agency

of the leading papers and periodicals relating to Agriculture and Horticulture, which we will forward promptly on receipt of subscription price. Address

GEO. E. & F. W. WOODWARD,
37 Park Row, N. Y.

BIRD HOMES.—The Danish correspondent of the London *Star* says:—

"A pleasing phenomenon, which I had before remarked in every part of the duchies I had hitherto visited, met my eye again on the drive to Christianfeld. On the outside of every cottage or farm-house we passed—even, indeed, on many of the trees by the roadside—hung several little square wooden boxes rather bigger than a London quarter loaf. In the centre was a small round aperture, large enough for any bird, from a wren to a thrush, to go in and out. On inquiry I found that these little contrivances were, what they appeared to be, homes for any little pair of warblers which pleased to build their nest in them. Some years back the farmers were justly punished for the devastation which, under the influence of false ideas, they made among the feathered tribe, by the vast increase of insects which played havoc with their crops. Like sensible men, they were no sooner convinced of their error than they did their best to remedy it. Societies for the preservation of birds were soon formed; the farmers everywhere did their best to forward the objects of the association, and bird murder became a misdemeanor. As the consequence of these measures the country is now plentifully stocked with numerous classes of birds. Flocks of crows, ravens, larks, field-fares, linnets, and yellow-hammers, as well as other kinds, are to be seen wherever one drives, and appear to have lost much of their natural timidity under the good treatment they have received of late years.

"This is a practice well worthy of adoption in this community. We are losing our native wild songsters. The destructiveness of our boys, aided by the mistaken notion of the farmers that these small birds do more harm than good to our fruit, is

fast destroying or banishing them. The introduction of this Danish practice around our country residences would do a great deal to stay the havoc of the destroyer, and retain the sweet music of our spring and summer mornings. A dozen or two of these bird-boxes upon the premises of each country residence would provide morning concerts which would have charmed 'Calypso and her nymphs,' and thus aid to swell the choral music which encircles the world.

" 'Tis always morning somewhere, and along
The awakening continents, from shore to shore,
Somewhere the birds are singing evermore.' "

NAILS FOR BORERS.—I have a lot of promising young peach trees, and it grieved me much to see the evidences that borers were destroying my hopes. Last spring, about the time the sap commenced circulating, I drove shingle nails into the trees where there were signs of borers, and in a short time it became evident that the trees were relieved from that insidious and destructive pest. I have applied the same remedy to cherry, plum and apple trees, with similar results; and have repeated the application whenever I have seen new proof of its need. Drive a few shingle nails to the head into parts of trees where borers are at work; and the sap, taking on the oxide of iron, will destroy or expel the enemy. Half a peck or a peck of ashes, according to the size of the tree, is very useful in a ring round the trunk at the roots, for keeping off woodticks and like vermin. In these "latter days," good men and loyal find hosts of rebels in field, garden and orchard; and the only terms these desperate foes offer, is, to gain their independence as invincible destroyers, or be exterminated. By all means give them the latter alternative as soon as possible. Creatures that are "for evil only good" have no rights which any men are bound to respect.—*Cor. N. Y. Observer.*

GINSENG.—This plant, associated with opium and China in the minds of most people, is a native of this country as well as of

Asia. The *Panax quinquefolium*, or ginseng, is an annual plant, the root of which is held in high esteem by the Chinese for its supposed medicinal qualities. Its name, *panax*, from *panacea*, was given to the genus by Linnæus. In this country, it is found growing in a wild state in Tennessee, Virginia, several of the Western States, and also in Canada. It is collected in large quantities in Ohio, Minnesota and Wisconsin, the roots carefully dried and sent to this city for shipping to China in payment for silks and teas. The dried root is now selling in this market at \$1.25 to \$1.35 per pound. See what a Dane County (Wisconsin) exchange says of it:—

“On to Richmond!” may be the watchword along the York and James rivers, but *Ginseng* is the cry in Menomonie and the surrounding neighborhoods. We are told that the speculators are paying 15 cents a pound for it in a green state—it is selling in New York for \$1.15, wholesale. Dunn and the surrounding counties are full of the desirable root, and men, women and children are out digging it; and we do not hesitate to say, if ‘John Chinaman’ does not have a sufficient supply of the ‘narcotic’ next year, it will not be from a lack of the efforts of the people of this neighborhood to furnish him the material to manufacture it from. We are informed that, in this early part of the season, \$8,000 have already been paid out in this county for Ginseng.”

SALISBURY CATHEDRAL.—This noble edifice—perhaps the most gracefully symmetrical of all the English cathedrals—is in imminent danger of falling. Mr. G. G. Scott, the celebrated architect who has for five years past been engaged in every cathedral restoration in the kingdom, says that there is nothing to prevent the spire falling at any day, like that of Chichester cathedral. Such a calamity has been feared since 1837, and efforts have been made to avert the threatened destruction of the fabric. The tower is held together only by iron bands, and Wren, who examined them in 1688,

said that if they were removed the spire would spread open the walls and cause its instant destruction. £40,000 are required to preserve the building, of which £6,000 are subscribed.—*Exchange*.

“I HAVE sometimes thought one good stirring up, whether with the hoe, the rake or the cultivator, was as beneficial as a good shower.

“When vegetables begin to look parched and the ground becomes dry, some gardeners think they must commence the use of the watering-pot. This practice, to a certain extent and under some circumstances, may perhaps be proper, but as a general rule it is incorrect. When watering has once commenced it must be continued, must be followed up, else you have done mischief instead of good: as, after watering a few times, and then omitting it, the ground will bake harder than if nothing had been done to it. Not so with hoeing or raking. The more you stir the ground about vegetables the better they are off; and whenever you stop hoeing, no damage is done, as in watering. Vegetables will improve more rapidly, be more healthy and in better condition at maturity by frequent hoeing than by frequent watering. This result is very easily shown by experiment. Just notice, after a dewy night, the difference between ground lately and often stirred, and that which has lain unmoved for a long time. Or, take two cabbage plants under similar circumstances: water one, and stir the other just as often, stirring the earth about it carefully and thoroughly, and see which will distance the other in growth.

“There are secrets about this stirring of the earth which chemists and horticulturists would do well to study with the utmost scrutiny and care. Soil cultivated in the spring, and then neglected, soon settles together. The surface becomes hard, the particles cohere, they attract little or no moisture, and from such a surface even the rain slides off, apparently doing little good. But let this surface be thoroughly pulveriz-

ed, though it be done merely with an iron rake, and only a few inches in depth, and a new life is infused into it. The surface becomes friable and soft, the moisture of the particles again becomes active, attracting and being attracted, each seeming to be crying to his neighbor, "Hand over, hand over—more drink, more drink." Why this elaboration should grow less and less, till in a comparatively short time it should seem almost to cease, is a question of very difficult solution, though the varying compositions of soils has doubtless something to do with the matter.

"But let the stirring be carefully repeated, and all is life again. Particles attract moisture from the atmosphere, hand it to each other; down it goes to the roots of vegetables; the little suction fibers drink it in; and though we cannot see these busy operations, yet we perceive their healthy effects in the pushing up of vegetables above the surface. The hoe is better than the water-pot. My garden is a signal illustration of the fact."—*Ten acres enough.*

INDIAN CORN FIBRE—A NEW PAPER MATERIAL.—The increasing consumption and advancing prices have been for years admonishing paper-makers and the public of the necessity for new paper material. Many substitutes have been tried. Straw, a cheap material obtainable in unlimited quantities, was made available for coarse papers; but it has only met the demand in a very limited degree. A year ago, or more, some specimens of paper, said to have been made from maize-fibre, were exhibited at the rooms of the Department of Agriculture as the product of an experiment conducted in Austria under imperial patronage. It seems that the experiments have been persevered in and extended. The *National Intelligencer*, says the Hon. Isaac Newton, the commissioner of agriculture, has just received from Austria a package containing the most remarkable results of the manufacture of Indian corn fibre. It embraces paper apparently equal to the finest

linen paper, and evidently superior in point of durability. Some of it is thought to be a good substitute for parchment. Specimens of colored paper are remarkable for their evenness and delicacy. Tissue paper, very light and transparent, is included; tracing and drawing papers, preferred by artists to those of English and French manufacture; cigarette papers, black and brown; flower paper, in beautiful colors, for the making of artificial flowers; silk paper of several qualities—in all sixty samples of paper, thick and thin, white and colored, substantially useful and delicately ornamental. They constitute a wonder of ingenuity, and illustrate the power of invention to create new forms from common materials, and the utility of patient effort in developing the perfection of skill in industry. Nor is this all. Bleached and unbleached crash, of several kinds, are exhibited, from the same material, the fibre of corn husks, or the outer covering of the ear, called in our Southern States *shucks*. But perhaps the most successful result, in heavy fabrics, is oilcloth for floors, of which two different colors are shown, both apparently of superior durability.

The process of paper-making has been for years in development. The spinning and weaving of maize fibre was commenced late in 1862. Both processes have been patented in Austria and other European countries, and in this country. These results have been attained under the direction of Dr. Chevalier Auer de Welsback, director of the imperial printing establishment at Vienna, and superintendent of the imperial paper mills at Schlogelmuhl, Austria. All portions of the husk are converted into paper-stuff, spinning-stuff, or husk meal, which is mixed with common flour. Nineteen per cent of paper fibre, ten of spinning material, and eleven of feed stuff are obtained, together making forty per cent, leaving a refuse of sixty per cent, much of it fine fibre and gluten, which may yet be filtered and utilized. Nor does the invention, even in its infancy, lack the important element

of profit. An expenditure of 273,740 florins in the manufacture yielded a gross return of 379,000 florins, and a net profit of 105,260 florins, exclusive of rent and use of capital employed. More particular information may be gathered at the Department of Agriculture.

The editor of the *Intelligencer* says he has never seen more beautiful, or firmer, smoother, or tougher paper, of every variety, from the coarsest to the finest, than the specimens referred to above, made of corn shucks; indeed, they excel anything he has ever seen from cotton or linen.—*Louisville Journ.*

RASPBERRY FOOD.—Some years since, in the course of correspondence with the lamented Dr. W. D. Brinckle, in regard to raspberry culture, he gave us the following information in regard to the food of that plant. The high reputation of Dr. B. as a pomologist, and his entire and gratifying success in raspberry culture entitle his opinions to great respect. We therefore commend his suggestions to those of our readers engaged in growing the raspberry:

"In my last letter to you, I promised to notice, at a future time, a kind of food to which the raspberry is particularly partial. The food to which I had reference is tan.

"In raising raspberry plants from root cuttings, I usually place about an inch of tan over the pots-herd at the bottom of the pot, which is then filled to within an inch and a half of the surface, with rich mould. In this the rich portion of root is planted, after which the pot is filled up with tan.

"In out-door culture, when the raspberries are planted out, it should be spread over the ground to the depth of two or three inches. The following spring this should be forked in, and another portion applied. But besides affording to the raspberry a kind of nourishment peculiarly adapted to its necessities, tan serves other good purposes of no inconsiderable importance. It keeps the earth about their roots in a moist and loose condition, and in this way greatly promotes the health and vigor of the plants."—*Culturist*.

RURAL ART.—The little town of Auteuil, among the environs of Paris, has become world-renowned for the beauty of its architecture, and yet there are not half a dozen expensive buildings in the entire precinct. The beauty of this hamlet has originated from the good taste of the landowners, a majority of whom were far from rich, in consulting upon the propriety of erecting every building, with an eye to the picturesque embellishments of a village. Consequently, even the stables, and the dove-cots and goat-house of Auteuil are built in a manner to delight the traveler's enraptured vision.

Now that the Landscape gardening and cottage architecture are permanent sciences, accessible to the masses, there is no excuse for a cottage builder to deface the general aspect of a town, by the erection of a misplaced or a misbuilt edifice. It will be found in practice that it costs less to put up a handsome building than an uncouth meaningless shingle domicile, while in case of resale, external appearance very often ensures a great bargain. We throw out these hints to those who may be tempted to build in this vicinity, for, as good taste is a corrective of extravagance, and invaluable to the general harmony of a picturesque village, we believe it will prove superior economy in petty freeholders, to cultivate the ornamental as well as the useful in erecting even a cottage residence.—*Northern Eagle, Pa.*

A MAMMOTH BUILDING.—Notwithstanding the magnitude of the war and the heavy drain upon the resources of the country, the irrepressible spirit of business enterprise of the universal Yankee nation still marches onward. The Continental Screw Company recently organized in this city have commenced the erection of a building for manufacturing purposes to cost \$400,000. It is to be built of stone and brick, three stories high, and covers one whole square in Jersey City, bounded by Washington, Harsimus, Warren and Bay streets, with two main fronts, one on Washington, the other on Harsimus streets, from designs furnished

by Charles Morrill, architect. It will be erected under his superintendence, and while it will contain many new features to expedite business and economize labor, yet great care has been paid to the solidity of the structure. The mason work will be executed by Keeney & Holliday of Jersey City, and the carpenter work by Elisha Sniffen of New York. The building will be furnished with four engines, each of 150 horse-power, built by Hews & Phillips of Newark. This Company was organized to use the machine invented by H. A. Harvey, son of Gen. Harvey, inventor of the machine so long used by the American and Eagle Company of Providence. Charles Bliven of the well-known hardware firm of Bliven & Mead, is President, and the capital is \$1,000,000 Edward E. Quimby has been selected as Engineer of the works.

EXHIBITION OF VEGETABLES AND FRUITS AT BURLINGTON COUNTY FAIR, N. J.—The exhibition of the present year, which opened at Mount Holly on the 4th instant, was in some respects, considering the difficulties under which the agriculture of the country has labored during the present season, superior to any of its predecessors. The display, possibly, was not as large as in some previous years, but the character of the articles exhibited was unapproachable. In the horticultural department the display was particularly attractive, showing conclusively that not only these plain Quaker farmers, but their wives and daughters as well, blend a discriminating taste and love of the beautiful with their rugged labors. Such pyramids of flowers, such pears, apples and grapes as covered the ample stands, would have tempted the most confirmed dyspeptic. The display of apples by Mr. William Parry, formerly speaker of the New Jersey House of Assembly, attracted especial attention, embracing, like that of Mr. Benjamin Gaskill, a very large number of the best varieties. Much more attention is given in this State of late years to the cultivation of this description of fruit than

formerly. The time was when one could travel for scores of miles without meeting a single orchard, but now almost every farm has its orchards of apples and peaches, from which first the cellar of the owner and next the cider press and the city markets are abundantly supplied. Probably none of the many growers of fruit have been more successful than Mr. Parry, though ex-Governor Olden, who has also a sort of horticultural passion, produces grapes and pears on his model farm at Princeton, which ordinarily carry off the palm from all competitors.

In the line of vegetables and grains, the exhibition was also suggestive of a growing agricultural intelligence and ability. One exhibitor entered a quantity of New Brunswick (British) oats, grown on his farm in this county, which weighed forty-three pounds a bushel. Other depositors exhibited sweet potatoes of extraordinary size, and melons in which, if emptied of their contents, the Thumbs, with Commodore Nutt added, might easily find a comfortable habitation. As for the pumpkins, they were simply immense, the smallest hiding under their golden rinds materials for at least fifty Thanksgiving pies. One gentleman exhibited two potatoes raised in one hill, which weighed respectively three and five pounds.

"TEN ACRES ENOUGH."—The author of "Ten Acres Enough," Mr. Edmund Morris, resides in this county, where all his farming experiments have been made. His farm is a gem of a place, but he is the last man one would be likely to suspect of engaging in any agricultural enterprise. But a few years since the editor of a leading daily paper in this state, and altogether literary in his tastes, his friends can only with the utmost difficulty persuade themselves that the successes recorded in his book have been really achieved by him; and yet such is the undoubted fact. If you should call upon him, he would exhibit with garrulous pride his thrifty acres, dwell upon the merits of Bald Face and Brindle, recount the achievements of his brood of

hens in the production of eggs; and should you chance to "stay to tea," would set before you the very choicest butter, the whitest bread, with cheese and cream, for the like of which afterwards you would barter almost anything—convincing you by his inviting fare, if his little book has failed to do it, that ten acres are enough to secure to any industrious, prudent man a life of comfort and content—enough to satisfy all material needs, while continually enriching the mind and heart by the lessons and revelations of seed-time and harvest.—*Cor. N. Y. Eve. Post.*

CATALOGUES, &c., RECEIVED.

DESCRIPTIVE LIST of Hardy Native Grape Vines, cultivated and for sale by George W. Campbell, Delaware, Ohio. In addition to a very complete list of out-door grapes, mode and time of planting, quality of vines, &c., Mr. Campbell gives a list of the principal Agricultural and Horticultural periodicals, the terms, and publishers; his doctrine evidently is that as the education of the public progresses in horticultural taste, so will the business of enterprising nurserymen increase, a fact that the past twenty years has successfully demonstrated and that the next twenty will repeat many times. The circulation of horticultural reading matter has had more effect on the enormous increase of the nursery trade than all other mediums put together, and if all nurserymen were as well posted as Mr. Campbell, they would make a strong effort to extend the circulation of all the popular horticultural periodicals of the day.

CATALOGUE of Green House, Stove, Orchideæ and other plants, Hardy and foreign grape vines, roses, trees, shrubs, &c. John Cadness, Flushing Exotic Gardens, Flushing, N. Y. Mr. C. has a well kept nursery and a fine assortment of all plants advertised, as we know from a personal observation. Much attention is paid to growing foreign vines, for fruiting in pots, and planting in graperies, as well as all the new and old varieties for open air culture.

THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS, No Eleven, 1865. Published by Luther Tucker & Son, Albany N. Y., will be ready in a few days.

"This ANNUAL has now become one of the standard publications of the day, and the New Number for 1865, for the beauty and profusion of its illustrations, and the interest and value of its contents relating to COUNTRY HOMES, Country LABORS, and Country LUXURIES—to all the branches of Agricultural and Horticultural PRACTICE—will be a welcome and important addition in the series." We shall keep a full supply at this office, and mail them to any address, post paid, on receipt of thirty cents; back numbers supplied. Three volumes of Rural Affairs are now published, each containing three volumes of the Annual Register, printed on finer paper, and handsomely bound in cloth. The three volumes contain one thousand pages of reading matter and over thirteen hundred engravings. We mail them, post paid, from this office on receipt of the Publishers' price, separately or together. Price \$1.50 each, or \$4.50 for the set.

RITCHIE's series of Union Portraits. Imperial steel plate engravings from Photographs by Brady, by far the best published, and are executed in the highest style of art, President Lincoln, Gen. Grant, Gen. Hancock, Gen. Sherman, and Admiral Farragut, thus far received. Published by Derby & Miller, No. 5 Spruce street, New York, and sent free by mail or express on receipt of one dollar each. Size for framing 14 x 18 inches

IMPROVED PRENOLOGICAL BUST, showing the latest classification, and exact location of the organs of the brain, designed for learners. Fowler & Wells, 389 Broadway, New York.

WHOLESALE Catalogue of fruit and ornamental trees, vines, &c., cultivated and for sale by Edward J. Evans & Co., Central Nurseries, York, Penn.

FULLER'S GRAPE CULTURIST.—The fifth thousand of this admirable work on grape culture is now ready, and meeting with a demand that must be gratifying to the author. Mr. Fuller is a practical grape grower and horticulturist, well versed in every

department of successful culture, and has produced a work that is worthy the attention of all who grow the vine. The instructions are plain and practical and engravings are not spared where necessary. Price \$1.50 post paid to any address.

CORRESPONDENCE.

CREVELING GRAPE.—*Messrs. Editors.*—At the Pomological Convention held at Rochester, on 14th September, Mr. Hooker opened the discussion on the Creveling Grape, by stating that it was productive and hardy—an early ripener—hanging well on the bunch, but could not be relied on as a market grape on account of its looseness.

This is so contrary to my experience that I beg leave to call attention to it. Some bunches were exhibited at Rochester that were imperfect, apparently injured in the blossom, perhaps by the ravages of the Rose Bug, *Melolontha Subspinosus*, or perhaps from defective fertilization.

In my own grounds I have had the Creveling Grape fruiting for three successive years, and the bunches are very fine and handsome; so beautiful, indeed, as to elicit the admiration of visitors, who speak of them as perfect specimens, "like the grapes of pictures," the bunch full—shouldered—tapering.

For the first time at Rochester, I heard of the bunch being loose, and confess I was much surprised to see those poor specimens exhibited there.

The explanation of the perfect bunches in my garden is that they were either uninjured by Rose Bugs, or that they were fertilised by other grapes in blossom at the same time.

Having been much annoyed with Rose Bugs in past years, I have succeeded in driving them from my grapes by strewing the vines with sulphate of lime (ground plaster or gypsum) from 7th to 15th of June. This application freely made at the

proper time, disperses the bugs, and has relieved my grapes for two seasons, while the roses, plum, cherry, apple and other fruit and forest trees, as well as shrubbery and weeds were literally covered by them. The rose bugs eat the grape blossom, and if unmolested, destroy the entire crop. If they can be kept off until the berries are formed, the bunches are generally full and perfect. The Isabella and Catawba bunches are often rendered very loose and imperfect by the rose bug.

Three years ago this pest was so abundant in my garden, that but few if any bunches, among some twenty or thirty varieties, were perfect.

In my endeavors to find and cultivate a first class outdoor grape, I have planted all the varieties that were recommended as worthy of cultivation in this latitude, and up to this time, have found no native black grape that stands higher for quality in all respects than the Creveling.

I am not prepared to say that I may not rate the Adirondac as its equal or even its superior, when I have tested it, time will show.

In regard to the fertilization of its blossoms, I may remark that my trellises are occupied by one or more of each variety of grapes under probation, and that my Creveling vines may be easily impregnated with the pollen from the Hartford Prolific Northern Muscadine, Perkins and Clinton, which are in flower on the same day with the Creveling, and that this will account for the bunches being so large and fine with me. It is an interesting experiment, and I suggest to cultivators to dust the Creveling

blossoms with the pollen of other grapes, the coming season.

While Hartfords and Concords bring 20 and 30 cents a pound in New York market, 30 and 40 cents in St. Louis, and 50 cents in Pittsburgh, let us not fear to cultivate the Creveling as a market grape, it is better in quality—ripens as early—and with loose clusters should bring a higher price than either, and will eventually become the grape for the masses, whose taste is being rapidly cultivated to distinguish between grapes of a high flavor and delicacy, and those of common quality.

W. A. WOODWARD.

Vail's Gate, N. Y. October 12th. 1864.

EDITORS HORTICULTURIST,—I think of building a small greenhouse for the purpose of wintering plants, south of my dwelling-house, facing the sun at 11 o'clock precisely. I intend to have it a lean-to, sixteen feet by ten wide, with a gable fronting the south, and the outside door in the centre of the gable. A nine-inch wall three feet below ground. Put on a sill and carry it up three feet, with three feet rise in the rafters, and the gable some two feet above the roof at the top. In building such a house, how much ventilation will it require? Will two adjoining the building at the top, and one on each side at the bottom, and one over the front door be enough? There will be a door opening out of the cellar, which will be used in cold weather and the other kept closed. My furnace is to be in the cellar, with the flue commencing at the north and running along the east, south and west sides; now, would it answer, for convenience sake, to bring the flue right back inside of the other, and raise it above the furnace, and attach a pipe and carry it twelve feet to a chimney? Which will be the best, wood at three dollars per cord, or coal at eight per ton, north of Lake Ontario, where the thermometer indicates ten to twenty degrees below zero. I intend to build on the fixed principle as far as possible, and tables instead of shelves, one above another, and places for hanging baskets in the gable. Could grape vines be

brought into such a house, by providing a place, and bring them in as soon as the frost would admit in the spring? I have vines growing five feet from the front; could they be brought under a board walk, and taken inside and fruited, and others planted and trained for that purpose against the house. Having no experience in these matters, I crave your advice through the HORTICULTURIST, knowing your willingness to help those that want help by pointing out where I would be likely to fail, or any idea you may suggest will be thankfully received.

Yours truly,

Coburg, C. W.

B. L.

[The ventilation will be ample, we think, It might be well, however, to have a sash in the outside door, made to swing in order to give all the ventilation possible in the spring, before removing the plants out of doors. There would be a difficulty in the draft of a flue built as you propose; better have it direct, with as few turns as possible, and a gradual rise the whole distance from the furnace. It would be better to take it entirely around the house than to return over or alongside the front flue Wood at \$3 per cord, if it is dry hickory is undoubtedly cheaper than coal at \$8 per ton. Careful experiments have shown that one cord of best dry hickory wood is equal in heating power to one ton of anthracite coal; that is, it will boil as much water and raise as much steam. Wood fires require more attention, however, and for that reason coal is generally preferred. Grape vines could be laid down under the walk, brought through the wall and fruited in the house during the summer, but the results are not as satisfactory as to have a house for the purpose solely. They should be taken into the house, in your climate, not much before the last of April, when the plants will be nearly ready to go out of doors. We think you will not be able to succeed with the vines planted against the back wall, as the heat of your house will cause them to grow during the winter, and the temperature will not be high enough to set and ripen the fruit properly.—Ed.]

THE HORTICULTURIST.

VOL. XIX.....DECEMBER, 1864.....NO. CCXXII.

THE INFLUENCE OF LIGHT ON VEGETATION.

THE influence of light upon growing plants is familiar to observation. The sun is the source of light to our system, but it should be known and considered that the effects produced by his direct rays are not the same as those produced by diffused and reflected light: in other words, the science of the sunbeam and the science of light are two very different things.

According to the theory of Newton, light is an emission of particles from a luminous body. The theory of Young and Fresnel represents it as the undulation of a subtle medium. But a sun-beam is a compound thing. Three distinct principles, if not more, or three modifications of one principle, are discoverable in every ray of sunlight. These are light, heat, and actinism.

When a sun-beam is admitted into a darkened chamber, and received upon a transparent prism, it is decomposed. A prismatic spectrum of brilliant hues is produced, as we know, upon the screen or wall. The three primary colors—red, yellow and blue—are the elements out of which the seven-hued image is formed. If a thermometer is placed in the blue ray of the spectrum it will indicate 56° Fahrenheit in the yellow ray

it will rise to 62°, and a little beyond the red ray, it will go up to 79°. But in the undecomposed sunbeam, the temperature is the same everywhere. It is evident, therefore, that there are heat rays, as well as light rays in the sunbeam. But this is not all. If a piece of photographic paper be placed within the spectrum, it will receive the deepest shade where the blue and violet rays fall upon it. Here, then, are rays which produce chemical changes in bodies. They are denominated *actinic* rays, and their influence is named *actinism*.

If we compare a plant growing in the shadowed recesses of the forest, with another fully exposed to the sun's rays, the pale, blanched hue of the former would be at once apparent. Here, then, we discover one of the effects of the light rays. Again, if we take a plant from the open air, and place it in a darkened room, where light is admitted through a single narrow window, a change will soon be visible. The plant loses its healthy appearance and becomes pale. The leaves most distant from the light, lengthen their stalks, and stretch up into a position in which they can obtain more copious draughts of the health-giving

stream. The whole plant turns toward the window, with an unmistakable yearning for the sun. If it is removed from confinement, and exposed to a full flood of light, its health and vigor returns, and it soon loses its pallid hue, and puts on its proper colors.

In the vegetable world, then, light and color are intimately associated, and the same is true in the animal world. The gorgeous hues of tropical vegetation are painted in the sunny skies of the climes where it grows. The light rays are the chief agents in producing that compound substance in the cells of plants on which their green color depends. Woody tissue will not form, to any available extent, without the influence of these rays. Deprived of them the massive oak would grow up a pallid, fragile plant, without strength or value.

Light stimulates plants to respiration, for they breathe as well as animals, and they repose, like them, in the dark hours of the night. In the day time they inhale the carbonic acid of the atmosphere and breathe out oxygen: in the night, also, they still drink in the same element, but it is in scanty draughts compared with what they take under the stimulus of light.

It has been observed that in the bending of plants towards the light, the blue rays have been found to be most powerful in producing this effect, while the red rays seem to repel, and plants to turn from them. The light which is reflected towards us from the blue sky is polarized, and polarized light possesses peculiar properties which doubtless affect the growth of plants in ways we do not comprehend.

Let us now turn to the heat-rays of the sun-beam. About one-third of those which infringe upon our atmosphere are absorbed by it, so that the air screens us from the full intensity of the sun's heat. As we descend below the surface of the earth, the temperature increases. But at length we reach a stratum where the temperature is always uniform. The caves of the French Observatory have steadily remained at 53° Fahrenheit. They are ninety feet below

the surface. Some mines have a perpetual spring. The heat absorbed by the earth's crust in summer essentially modifies the cold in the winter season.

Heat appears to have great influence upon vegetable irritability. The *Desmodium Gyraus*, which grows upon the banks of the Ganges, moves its leaflets perpetually both by day and by night. But this curious plant is motionless except where the temperature is about 100°. The sensitive plant requires artificial warmth in our northern climate, and although our vegetation is not destitute of instances of this sort of irritability, we have nothing analogous to the *Desmodium Gyraus*.

When Dr. Franklin placed pieces of different colored cloth upon snow, he found that the sun's rays melted the snow more rapidly beneath some colors than beneath others. The order of absorption of heat by the different colors, is black, brown, green red, yellow, and white. So that black clothing drinks in the sun's warmth more greedily than that which is of a lighter color. Those bodies, however, which readily absorb heat, part with it freely also—in philosophical language, they have high radiating powers.

Heat is the chief agent in producing the trade winds. The heated air of the equatorial region rises into the higher regions of the atmosphere, and colder air rushes in laterally to supply its place. This constant interchange of air between the equator and the poles, and the rotation of the earth, conjointly occasion these well-known winds.

The actinic rays now demand notice. They appear to be especially powerful in producing the germination of seeds, while the light-rays actually seem to be opposed to this development of vitality. The stem of a young plant grown under the influence of the actinic rays remain soft, and extends to a great length without enlarging in diameter. It is for this reason that gardeners sometimes use deep blue glasses to aid cuttings in striking root.

Actinism is less known as to its effects upon the animal kingdom. The different

shades of color in the human race, freckles and sunburn, are all probably dependent, in part at least, upon the actinic rays of the sunbeam. Chlorine and hydrogen gas mingled in combining proportions, do not unite in the dark. But if the mixture is exposed to the light of the sun, they at once combine, and generally with a violent explosion. If the chlorine alone is exposed, for a time, to the sunlight, it will afterwards unite with the hydrogen in the dark.

The actinic rays produce an effect upon the granite rock, as well as upon the delicate organization of the plant. But during the night these effects are wholly, or in part, obliterated, and but for this nocturnal rest the hardest crag would crumble, and in time fall to pieces and perish.

Actinism has furnished us one of the most wonderful and pleasing arts of modern times—the art of photography. The whole mystery of the Daguerreotype process, in its outlines, may be readily comprehended. A polished plate of silvered copper is subjected to the vapor of iodine, and is then

transferred, without exposure to the light, to the camera. The image of the object to be taken, rapidly depicts itself upon this prepared plate, which is then removed from its dark receptacle, and exposed to mercurial vapor. The picture now appears, and must be rendered permanent by immersion in a solution of hyposulphite of soda. These are the main principles involved in the art of Photography, and in its different types and forms, although the processes are varied in the production of different kinds of pictures.

In addition to these three principles in the sunbeam—light, heat, and actinism—it is believed by some of the most careful experimenters, that electricity may also be detected.

In the animal kingdom the effects of light upon development and growth are equally apparent and important. But investigations in this direction would lead us into too wide a field for our present purposes.

A GREEN-HOUSE AND GRAPERY COMBINED.

BY GEO. E. & F. W. WOODWARD.

GREEN-HOUSES and Graperies are usually erected as separate structures. While it is desirable that they should be so on extensive places where much accommodation is required, in grounds of moderate extent many advantages are gained by having the houses

by the owner and his friends, are all obtained by such an arrangement. In the present instance the Green-house occupies

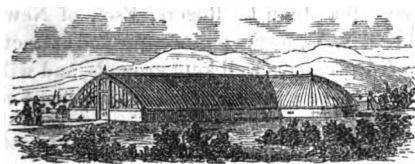


Fig. 1.—Perspective.

connected. Facility for heating and management, protection of those houses requiring the most heat, by those kept cold or at only moderate temperature, and the ease with which all departments may be visited

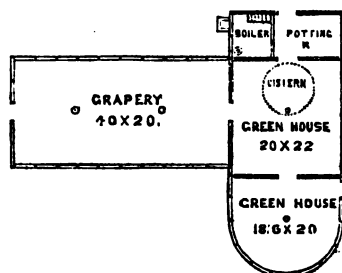


Fig. 2.—Ground Plan.

a position east and west, and is protected on its north and most exposed quarter by the Grapery. The boiler located as shown on the plan, supplies heat to all the houses.

The Grapery, not being intended as a forcing or early house, has but one hot water pipe, which will afford sufficient heat to enable the vines to be started two or three weeks earlier in the spring, or if not desirable to anticipate their natural growth, will prevent them receiving sudden checks from frosty nights, which sometimes happen at the latter end of April and beginning of May, after the vines have broken their buds. We can prolong the season also, until about Christmas, in favorable years. Several of the late ripening, and late keeping varieties of the Grape, are intended to be grown, Lady Downes, Barbarossa, Frogmore St. Peters and others. These by the addition of another pipe and proper care in management, could be kept on the vines in fine condition until February, and perhaps March.

The sill or wall plate of the Grapery, is but two feet above the border; thus giving nearly the whole length of cane for fruiting upon the rafter. Side lights are dispensed with, bottom ventilation being afforded by apertures through the brick wall, closed by shutters. The wall is supported on stone lintels, resting on brick piers placed about five feet apart, extending to the bottom of the border, allowing free access for the vine roots to the outside. Ventilation at the top is effected by means of sashes, hung in the roof at the ridge, which are raised and lowered by an iron shaft running the length of the building, with elbow attachments at each ventilator. A cord and lever at one end, works the shaft, raising the whole of the ventilators at one operation. This is by far the best method of ventilation, but more expensive than that generally used. It is strong, effective, rarely requires repair, and the sashes, are never in danger of being

blown open and broken by high winds. The floor level of the Green-house is two feet below that of the Grapery, in order that there may be sufficient height at the sides, to place plants on the tables, and bring them near the glass. General collections of plants cannot well be grown in one house; for this reason, we have the house divided by a glass partition. By an arrangement of valves in the hot water pipes, and independent ventilation a different temperature can be maintained in each. Plants requiring a considerable degree of heat will find a congenial location in the central house, while those in bloom, and others to which a cooler atmosphere is more suitable, will be placed at the circular end of the building.

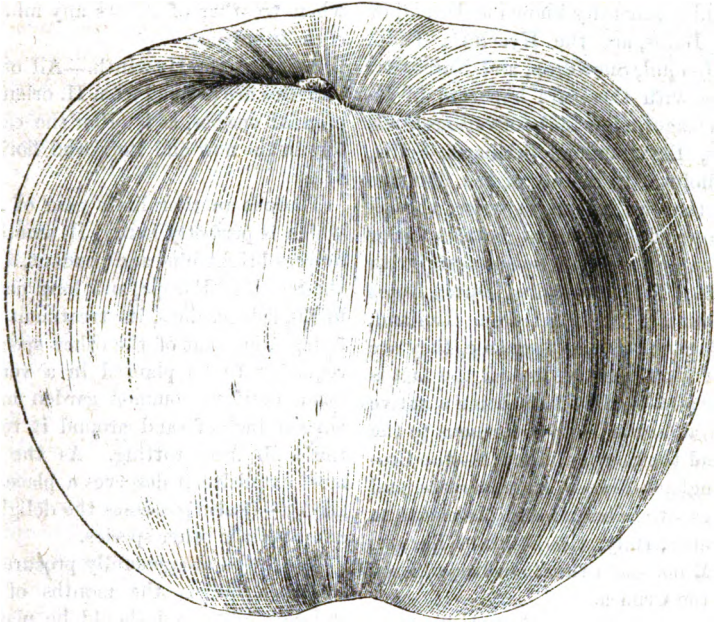
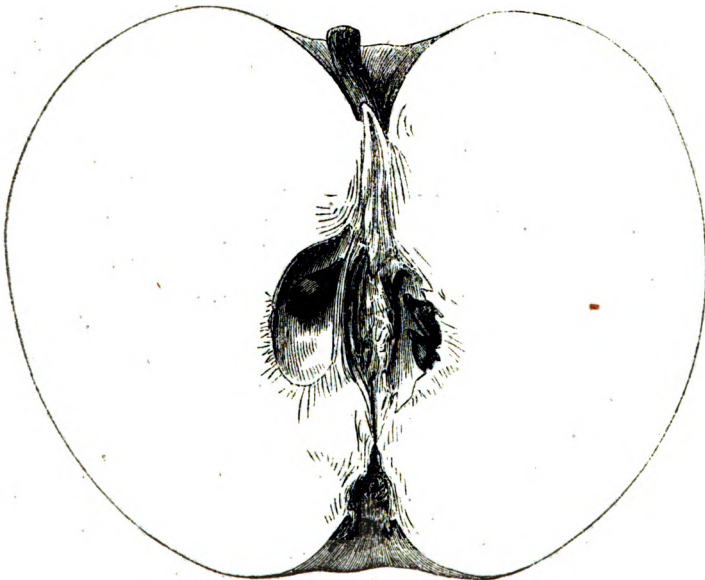
Three rows of heating pipe run around the Green-houses, which will give ample heat in the coldest weather. A propagating table is provided by enclosing a portion of the pipes in the central house. Below the floor is a cistern of 3000 gallons capacity, from which tanks holding 100 gallons each are supplied. The Green-houses are entered through a door and porch on the south, not shown in the engraving, also through potting room and Grapery. The design of these houses gives an opportunity for further addition if desired, by a wing on the south, corresponding with the Grapery on the north. Such an extension would improve the architectural appearance of the whole. An early Grapery might be thus located and be heated from the same boiler. These houses, lately designed and erected by us for John L. Rogers, Esq., of Newburgh, N. Y., form a picturesque and attractive feature in his well kept grounds, and will no doubt be a source of much enjoyment to their owner.

APPLE—BEAUTY OF KENT.

THIS is one of the most beautiful apples in appearance that we have, and though of second rate flavor, is desirable on account of its size and showiness. Mr. Downing

gives the following description of it. The tree grows very strong and upright, moderately productive. Fruit very large, roundish, but flat at the base, and narrowing dis-

tinctly to the eye, where it is slightly ribbed. Skin smooth, greenish yellow, marked with large broken stripes of purplish red. Stalk short, slender, deeply planted in a round, russety, corrugated cavity. Calyx small, set in a narrow basin. Flesh juicy, crisp, tender, with a simple sub-acid flavor. Of English origin.

*Fig. 1.—Beauty of Kent.**Fig. 2.—Section.*

WRITTEN FOR THE HORTICULTURIST.

DUTCH BULBS.

BY EDWARD S. RAND, JR., BOSTON.

THE bulbs generally known as Dutch, or Holland Bulbs, are the Hyacinth, Tulip, Crocus, Jonquil, Snowdrop, and Narcissus: sometimes with these are imported in assorted packages, a few bulbs of various kinds of Lilies, Erythronium, Fritilaria, Scilla, and Gladiolus. It is only of the first five however that we intend to write, though the same general treatment, both in parlor and garden culture, will be successful with the others. These are called Dutch Bulbs because usually imported from Holland, and not because, as many suppose, they are natives of that country, indeed the fact is far otherwise—the Hyacinth being a native of the Levant—the Tulip indigenous to the Levant and the South of Europe—the Crocus to England, France, Italy, Greece and the Crimea—the Jonquil and Narcissus to Spain, France, Italy, the South of Europe, and Asia Minor—and the Snowdrop to England and the Crimea.

From the earliest times these bulbs have been extensively grown in Holland; there the finest florists' varieties have been raised, and on that country the floricultural world is dependent for its supply.

Were the question asked what one plant, alike commendable for beauty and fragrance, can be grown in the parlor with the least expense and trouble, we should answer the hyacinth. The plant has its imperfections, (if we may be allowed so to speak) the foliage is by no means graceful, the flower is transient—and once out of bloom the bulb is almost worthless. Yet a fine effect in foliage may be produced by massing, and by different plantings, a continued succession of bloom.

These bulbs being of kindred nature require the same general treatment as to water, light and air, and flourish in the same soil and in similar situations. We need, therefore, only to particularise when treating of one species, being careful to note

when treating of others any minor differences in culture.

And first the Hyacinth.—All our garden varieties are derived from *H. orientalis*, the original species, as is often the case, being lost in the new and improved florists' varieties.

There is another little gem of a species which is perfectly hardy, *H. amethystinus*, flowers bright blue and pendant, a native of the South of Europe, and long naturalized in English gardens, its treatment only differing from that of the other species in its requiring to be planted in a very sandy loam, or if in common garden mould, to have an inch of sand around it to prevent the bulb from rotting. As the color is most exquisite it deserves a place in every garden—it also possesses the delightful fragrance of the other species.

Hyacinths are generally procured of the seedsmen during the months of October and November, and should be planted immediately, both for parlor and garden culture. Much depends upon the selection of the bulbs, yet size is no criterion of excellence, some of the best varieties are always small, others always large. As a general rule, hard, sound bulbs, which feel firm to the finger when pressed, will give good bloom, any which are soft or scaly (like a lily) should be rejected. The color of the bulb is also no sure rule for determining the color of the flower, though generally those with dark red or blueish skins, produce red, pink or blue flowers, and white skinned bulbs are more likely to be white or yellow varieties.

GARDEN CULTURE.

The bed should be of rich loam, with a liberal admixture of well-rotted cow-dung, and sand enough to keep it from becoming sodden. Good drainage is essential; where the subsoil is clay this must be secured by excavating the bed to the depth of three

feet, and filling in with a layer of small stones for about six inches or more, then replace the soil; where the subsoil is gravel no drainage will be required. The bed should slope a little to allow the surface water in winter to run off and should face the south or west, in order to first feel the warm rays of the sun in early spring, and should be sheltered from cold winds; an angle formed by the house, and protected from the north and east is an admirable place for a bulb bed.

Having thus located and provided drainage for our bed, dig it well and pulverize the soil, raking the surface smooth. Lay the bulbs upon the bed, about nine inches apart, in the place each is to occupy, so as to be sure to ensure regular planting, with the name of each (if it is desirable to have named varieties) broadly written with a soft blacklead pencil, on a wooden lable which has been smeared with white lead. Then, plant each bulb about two inches deep firmly pressing the earth around it.

If the soil is clayey it is a good plan to surround each bulb with a handful of common sand, which will prevent rotting. The bulbs will immediately begin to make roots, which will continue to grow until the ground freezes. On the approach of severe frosts throw over the bed a covering of litter, old straw or long manure, to the depth of four inches; this will often protect the ground from frost, and thus give the roots a longer season of growth, but care must be taken not to remove it too early in the spring, as the bulbs often grow up into it, and a severe frost may nip the shoots and greatly injure if not destroy the flower. After the flowering season is over, the old flower stems should be cut away, but none of the foliage, which will of itself die away before midsummer. The general rule in the management of bulbs is, the better and larger you grow the foliage the finer will be the flower. When the leaves have all become yellow the bulb should be taken up, carefully dried and put away till Autumn; but if merely a spring show is desired, the best

and most common way is to leave the bulb in the ground—where it will bloom every spring, but seldom as finely as if annually replanted. Hyacinths in the open air are usually sturdy enough to support themselves, sometimes, however, they need stakes, which should be young shoots of willow with the bark on, which are not easily distinguishable among the foliage.

PARLOR CULTURE.—IN EARTH.

Select soft-baked eight inch pots, and put in the bottom of each about an inch of broken potsherds, charcoal or small pebbles, as may be most convenient: then fill to the top with a compost of one part loam, one part clean sand, and one part well-rotted cow-manure, with an admixture of bone or horn shavings, if procurable, which gives increased size and brilliancy to the flower. Set one bulb in the centre of each pot, just deep enough to allow the top of the crown to be seen—press the soil around the bulb and give a thorough watering. Set the pots in a dark but warm cellar—supplying them with water from time to time, to prevent them from drying up. The plants should be kept in the dark for four to six weeks, at the end of which time the pots will be full of roots, but the sprouts will not have grown more than an inch. The pots may then be brought into the full sun-light—where the shoot will soon change from yellow to deep green, will grow very rapidly, and produce flowers in about four weeks. Water may be liberally supplied, only taking care not to give so much as to rot the roots.

IN WATER.

Select hard, medium sized bulbs, examine carefully to see that there are no offsets or side bulbs. Place the bulbs in the glasses, which should be filled with rain water, and set them in a warm, dark closet. They should thus remain until the roots at least half fill the glass, occasionally being examined that the water does not become foul or evaporate.

Bring them out to full sun-light as need-

ed, they will bloom in about three weeks. The flowers of bulbs grown in water are generally weaker and less highly colored than of those grown in earth. Bulbs thus grown may be planted in earth as soon as out of bloom, and the bulb being thus much strengthened, blooms better the following year—but usually such bulbs are not worth preserving. A few drops of aqua ammonia added to the water in which the bulbs grow will give a high color to the flower. The water should be changed once in ten days, care being taken that that filled in be of the same temperature with that turned out.

If the roots become coated with green slime, they may be washed in luke-warm water, care being taken not to break or bruise them.

IN MOSS AND SAND.

These modes of growing bulbs are similar to those just described—the general treatment is the same. The moss should be the white sphagnous moss of meadows, as this is peculiarly retentive of moisture, and is neat and clean. The sand used should be white or silver sand, such as is used by glass makers—beach sand will do if it has previously been freshened by frequent washings in fresh water. In planting, the crown of the bulb should be just protruded above the moss or sand. A mode of culture which we have adopted for the past few years seems to combine all the advantages of earth, water and moss culture, and has been so successful that we have no hesitation in recommending it for general adoption. About the twentieth of October, plant the bulbs in earth and put them in the cellar, as above described, being careful to have pots all of one size. Now for the bulb table: let it be of black-walnut with turned legs, so as to be an ornament to the parlor, about four and a half feet long by two feet wide in the clear, so as to hold three rows of eight pots each, let the table be hollow and eight to ten inches deep—all thoroughly joined together and well coated with white lead on the inside, particularly

around the joints. Into this table fit a zinc pan of the same depth, with wire handles, which turn down into the pan on each end. About the middle of November bring from the cellar enough pots of bulbs to fill the table, set them in the pan and fill the interstices with common wood moss; when it is level with the top of the pots cover all with some short green moss, such as is found on decayed trees or in deep woods. You have thus a very pretty moss garden with the yellow shoots of the bulbs peeping through. Water copiously every morning, letting it fall from the rose of a small watering pot on to the moss. The water will collect in the pan, the roots of the bulbs find their way out of the holes in the bottom of the pots and riot in the moisture: the shoots grow wonderfully, and you have hyacinths of marvelous size in a moss garden. As soon as a flower fades, gently lift the moss, remove the pot, and in its place put a new one from the cellar. And thus we have bulbs in full bloom from Thanksgiving until they again blossom in the border. A few *Narcissus*, especially the *Polyanthus* varieties, add much to the effect. The table should be kept in full sun-light, and may be made of any material or dimensions.

VARIETIES OF HYACINTHS.

Among the hundred or more varieties we do not pretend to make a complete selection. The new and costly varieties are not what we seek, we want a free, showy bloom, and for our purpose single varieties are better than double—the bulbs should cost from a shilling to thirty cents each. The following are good, free blooming kinds, of various colors:

RED.

Rex Rubrorum, Grootverst Acteus, Bouquet Tendre, Mars, Grand Vedette, Rose la Mignonne, Waterloo, Belle Eleonore, Pronk-juweel, Amy.

WHITE.

Glorea Florum, Triomphe Blandine, Anna Maria, Mont Blanc, Victoria, La Virginite, Voltaire, Grand Vainqueur, Konigs Juweel, Miss Kitty.

YELLOW.

Alida Jacoba, Fleur d'Or, Ophir, Bouquet d'Orange, Louis d'Or, Heroine, Canary Bird.

BLUE.

Orondatus, Laurens Koster, L'Amie du Cœur, Emilius, Amicus, Argus, Robert Peel, A la mode, Roi Josaphat, Charles Dickens, Emicus Porcelain Sceptre, Iris, Bouquet Purple.

THE TULIP.

With the exception of the varieties of *Tulipa suaveolens*, commonly known as Duc Van Thol, this bulb is not desirable, nor is it a favorite for parlor culture. The bulbs of the Van Thol are small, and should have the same general culture as hyacinths in earth, only three or four may be planted in a six-inch pot, and the crown of the bulb should be covered; in water they do not succeed, though in sand they will flower well. The flower is scarlet and yellow, each bulb produces one on a stem not more than four inches in height: there are single and double varieties, of which the former are more desirable.

The Sun's Eye Tulip, *T. oculis solis*, is a dwarf species which is sometimes grown in the window, the flowers are red, with a dark eye, and the bulbs require the same treatment as the Van Thol.

In Garden Culture a bed prepared as directed for hyacinths will do admirably—the soil should be sandy loam with the rotted turf of an old pasture, though they bloom well in any garden soil. They should be planted like hyacinths, the taller growing varieties in the middle of the bed, edging off with dwarf varieties. All the garden varieties are the offspring of *T. Gesneriana*, and are very numerous and of various shades and combinations of color.

Named varieties may be procured of all florists, varying in price from a few cents to a dollar. For general effect, the Tulip is best grown in masses, which produce a gorgeous appearance when in full bloom.

THE CROCUS.

This is a little gem of a bulb, always welcome with its bright blossoms as the

harbinger of spring. There are about twenty-five species (including the autumnal flowering) and numerous varieties.

As a parlor plant, the crocus is very pretty but rather insignificant—it is in the garden it displays its full beauty. If you grow for the parlor it should be treated like a hyacinth, and grown in earth—half a dozen bulbs may be planted in a pot—they should be covered about an inch with soil. Pretty effects are sometimes produced by planting in ornamental pots, the favorite shape of which is that of a porcupine; when the leaves grow they represent the quills, but from the difficulty of making all the bulbs shoot out and bloom at the same time, the appearance is more often bare and ragged. In the garden, the bulbs should be planted in masses or lines, as the flowers are too small to be effective singly.

The following are original species from which most of the varieties have sprung—the Autumnal species are very beautiful and desirable, blooming at a season when all other flowers are gone:

Crocus vernus, lilac, white, or purple.

“ *versicolor*; purple and white.

“ *biflorus*; white and purple.

“ *minimus*; white and purple.

“ *susianus*; yellow.

“ *sulphureus*; “

“ *luteus*; “

“ *aureus*; “

“ *sativus*; pale purple, autumnal flowering, the saffron of commerce.

“ *speciosus*; purple, large flowers, autumnal flowering.

The Crocus is impatient of removal, and the bulbs once planted should seldom be disturbed.

THE SNOWDROP.

This pretty little bulb is a general favorite, blooming in the snow, and always attractive from its grace and delicacy. As a parlor plant it is too small to be of value. In the garden it thrives in any soil; it should be planted in October, in patches, and the bulbs should be left undisturbed. There are double and single varieties of the common species, (*Galanthus nivalis*) natives

of England. The Crimea snowdrop (*G. plicatus*) is the finest species, producing very large green and white flowers, but it is not common. All the species have a delicate, peculiar, and very pleasant fragrance.

THE JONQUIL AND NARCISSUS.

Both of these bulbs, the former being only a variety of the latter, are favorites for parlor culture; the treatment required is the same as for the hyacinth, and they may be grown equally well in earth, sand, moss or water. The same soil is also suitable for them. A few plants in the hyacinth case previously described, have a pretty effect. The Jonquil (*Narcissus Jonquilla*) is a native of Spain—there are both single and double flowered varieties, both are exquisitely fragrant and bloom freely; the flowers are yellow and very showy. There are many species of the narcissus, all of which are valuable border flowers, and most of them bear forcing well.

Those most commonly grown in the parlor are

Narcissus Italicus, the Roman Narcissus; flowers pale yellow, single—or creamy-white, double, and exquisitely fragrant—native of Italy. *N. papyraceus*, the paper-

white narcissus; flowers pure white, single, very fragrant—native of Asia Minor.

Narcissus Tazetta, or *Polyanthus Narcissus*; flowers white and yellow, very fragrant—native of Spain.

Narcissus Trewianus, or *N. Bazelman* major; flowers white and yellow, fragrant.

The following are superior florists varieties of the *Polyanthus Narcissus*:

Grand Monarque; white and yellow.

Mignonne; orange.

Hercules; white and orange.

Grand Primo; white and citron.

Grand Prince; white and lemon.

Soleil d'Or; yellow and orange.

The other bulbs often imported as Dutch bulbs, such as *Scillas*, *Ornithogalum*, *Lilies*, *Fritillarias*, *Iris*, &c., require the same general garden treatment as the *Hyacinth* and *Narcissus*—all will grow in any good garden soil, but do better with a prepared border of sandy loam. Care must be taken to adapt the depth of planting to the size of the bulb: as a general rule, the crown of the bulb should be covered at least an inch.

Scilla præcox—the early blooming squill—bears forcing well, is adapted for parlor culture, and remarkable for the exquisite blue of the flowers.

HOW TO MAKE A PARADISE IN THE COUNTRY.

BY THE AUTHOR OF LETTERS FROM UNDER A BRIDGE.—CONTINUED.

I AM supposing all along, dear reader, that you have had no experience of country life, but that sick of a number in a brick block, or (if a traveller) weary of the "perpetual flow of people," you want a patch of the globe's surface to yourself, and room enough to scream, let off champagne-corks, or throw stones, without disturbance to your neighbor. The intense yearning for this degree of liberty has led some seekers after the pastoral rather farther into the wilderness than was necessary; and while writing on the subject of a selection of rural sites, it is worth while, perhaps, to specify the desirable degree of neighborhood.

In your own person, probably, you do not combine blacksmith, carpenter, tinman, grocer, apothecary, wet-nurse, dry-nurse, washerwoman and doctor. Shoes and clothes can wait your convenience for mending; but the little necessities supplied by the above list of vocations are rather imperative, and they can only be ministered to in any degree of comfortable perfection by a village of at least a thousand inhabitants. Two or three miles is far enough to send your horse to be shod, and far enough to send for doctor or washerwoman, and half the distance would be better, if there was no prospect of the extension of the village limits. But the com-

mon diameter of idle boys' rambles is a mile out of the village, and to be just beyond that is very necessary, if you care for plums and apples. The church bell should be within hearing, and it is mellowed deliciously by a mile or two of hill and dale, and your wife will probably belong to a "sewing circle," to which it is very much for her health to walk, especially if the horse is wanted for plowing. This suggests to me another point which I had nearly overlooked.

The farmer pretends to no "gentility;" I may be permitted to say, therefore, that neighbors are a luxury, both expensive and inconvenient. The necessity you feel for society, of course, will modify very much the just stated considerations on the subject of vicinage. He who has lived only in towns, or passed his life (as travellers do) only as a receiver of hospitality, is little aware of the difference between a country and city call, or between receiving a visit and paying one. In town, "not at home," in any of its shapes, is a great preserver of personal liberty, and gives no offence. In the country, you are "at home," *will-you will-you*. As a stranger paying a visit, you choose the time most convenient to your self, and abridge the call at pleasure. In your own house, the visitor may find you at a very inconvenient hour, stay a very inconvenient time, and as you have no liberty to deny yourself at your country door, it may (or may not, I say, according to your taste) be a considerable evil. This point should be well settled, however, before you determine your distance from a closely-settled neighborhood, for many a man would rather send his horse two miles farther to be shod than live within the convenience of "sociable neighbors." A resident in a city, by-the-way (and it is a point which should be kept in mind by the retiring metropolitan) has, properly speaking, no neighbors. He has friends, chosen or made by similarity of pursuit, congeniality of taste, or accident, which might have been left unimproved. His literal neighbors he knows by name, if they keep a brass plate, but they are con-

tented to know as little of him, and the acquaintance ends, without offence, in the perusal of the name and number on the door. In the city you pick your friends. In the country you "take them in the lump."

True, country neighbors are almost always desirable acquaintances—simple in their habits, and pure in their morals and conversation. But this letter is addressed to men retiring from the world, who look forward to the undisturbed enjoyment of trees and fields, who expect life to be filled up with the enjoyment of dew at morn, shade at noon, and the glory of sunset and starlight, and who consider the complete repose of the articulating organs, and release from oppressive and unmeaning social observances, as the fruition of Paradise. To men who have experience or philosophy enough to have reduced life to this, I should recommend a distance of five miles from any village or any family with grown-up daughters. In my character of dollar, I may be forgiven for remarking, also, that this degree of seclusion doubles an income (by enabling a man to live on half of it), and so freeing the mind from the care of pelf, removes the very gravest of the obstacles to happiness. I refer to no saving which infringes on comfort. The housekeeper who caters for her own family in an unvisited seclusion, and the housekeeper who provides for her family with an eye to the possible or probable interruption of acquaintances not friends, live at very different rates; and the latter adds one dish to the bounty of the table, perhaps, but two is to vanity. Still more in the comfort and expensiveness of dress. The natural and most blissful costume of man in summer, all told, is shirt, slippers, and pantaloons. The compulsory articles of coat, suspenders, waistcoat, and cravat (gloves would be ridiculous) are a tribute paid to the chance of visitors, as is also, probably, some dollars difference in the quality of the hat.

I say nothing of the comfort of a bad hat (one you can sit upon, or water your horse from, or bide the storm in, without remorse) nor of the luxury of having half a dozen,

which you do when they are cheap, and so saving the mental burthen of retaining the geography of an article so easily mislaid. A man is a slave to anything on his person he is afraid to spoil—a slave (if he is not rich, as we are not, dear reader!) to any costly habiliment whatever. The trees nod no less graciously (it is a pleasure to be able to say) because one's trousers are of a rational volume over the portion most tried by a sedentary man, nor because one's hat is of an equivocal shape—having served as a non-conductor between a wet log and its proprietor; but ladies do, and especially country ladies; and even if they did not, there is enough of the leaven of youth, even in philosophers, to make them unwilling to appear to positive disadvantage, and unless you are quite at your ease as to even the ridiculous shabbiness of your outer man, there is no liberty—no economical liberty, I mean—in rural life. Do not mislead yourself, dear reader; I am perfectly aware that a Spanish sombrero, a pair of large French trousers plaited over the hips, a well made English shoe, and a handsome checked shirt, form as easy a costume for the country as a philosopher could desire. But I write for men who must attain the same comfort in a shirt of a perfectly independent description, trousers, ofteneat, that have seen service as tight, and show a fresher dye in the seams, a hat, price twenty-five

cents, (by the dozen,) and shoes of a remediless capriciousness of outline.

I acknowledge that such a costume is a liberty with daylight, which should only be taken within one's own fence, and that it is a misfortune to be surprised in it by a stranger, even there. But I wish to impress upon those to whom this letter is addressed, the obligations of country neighborhood as to dress and table, and the expediency of securing the degree of liberty which may be desired, by a barrier of distance. Sociable country neighbors, as I said before, are a luxury, but they are certainly an expensive one. Judging by data within my reach, I should say that a man who could live for fifteen hundred dollars a year, within a mile of a sociable village, could have the same personal comforts at ten miles distance for half the money. He numbers, say fifteen families, in his acquaintance, and of course pays at a rate of fifty dollars a family for their gratification. Now it is a question whether you would not rather have the money in board fence or Berkshire hogs. You may like society, and yet not like it at such a high price. Or (but this would lead me to another subject) you may prefer society in a lump; and with a house full of friends in the months of June and July, live in contemplative and economical solitude the remainder of the year. And this latter plan I take the liberty to recommend, more particularly to students and authors.

THE CARNATION,—ITS HISTORY AND CHARACTER.

BY AN AMATEUR FLORIST.—CONCLUDED.

III. ITS CULTURE.

WHY is it we so seldom see a good collection of Carnations in our gardens? This question is answered by most persons, by saying that the climate does not suit them. I am inclined to think this a mistake. In Germany the Carnation is raised in very great perfection, and the climate there is exceedingly like our own.

I am well convinced that it is not the climate. I am also pretty confident that it

arises from the too trifling care bestowed on this plant.

The Carnation is treated by most persons like a common Pink, or hardy border flower, I am sorry to say, that with this treatment it will not succeed here, and does not succeed either in England or on the Continent. There are, to be sure, some few hardy kinds, and among them the Picotees figure largely, which will answer very well in the open border, with a slight covering in winter

But to have a good variety of the best Carnations, they cannot be grown otherwise than in pots.

And are they not more truly worthy of this care than most of the poor starved things that figure among green-house plants? Half the care bestowed at the present day, by the numerous admirers of the Fuchsia, would afford us the most charming and perfect Carnations.

Well then, I must commence by saying, that as good a soil as need be for this plant is made by observing the following proportion, viz., two barrowfuls of fresh loamy soil, (or, what is much better, the soil made by rotting down sods,) two barrowfuls of thoroughly rotted stable manure—that from a spent hot-bed is excellent, and one barrowful of clean sand. Mix the whole very thoroughly together, throwing out the lumps, but not sifting it. You may, if you please, sift a small quantity to place on the top of the pots.

I shall speak of the propagation of this plant directly. I am now supposing the layers to have rooted sufficiently to be taken off, which they usually are about the first of September. You must then separate the layers from the old plant with a knife, lift them with a transplanting trowel, trimming off carefully any decayed or broken parts, and pot them in the soil already described, in half-pint pots, one plant in each pot. Use bits of charcoal for the drainage—in other words, for covering the hole in the bottom of the pot.

The pots should all be placed together, in a cool and rather sheltered position, where they can be shaded for ten days. The plants must be pretty liberally supplied with water from this time till the middle of October, when they will be well established in the pots.

Next, for their winter quarters. This, though simple enough, is yet a matter of great importance; for unless it is carefully attended to, you may lose your whole stock in one winter's day.

The best way of keeping the Carnation through the winter, is in a common hot-bed

frame with glass lights. Such a frame three feet by eight, will hold a great many of these pint pots, each holding a young rooted plant.

Now, the great points in keeping the Carnation through the winter, are, to keep it cool and dry, and in such a condition that it will not be exposed to sudden changes of weather. A severe frost will not hurt it at all, if the plant is kept quite shaded in the frame till it has had time to thaw out *very gradually*.

The most successful mode of keeping this plant in winter is pursued by a friend of mine, and is as follows: He chooses a common hot-bed frame, and sinks it nearly even with the surface of the soil, or at least not rising more than three inches above it, in a cool, rather shaded, *northern* exposure. He takes out the soil in the frame, about ten inches deep, makes the ground quite level and hard with a pounder. Then he cements the floor over with cheap common mortar, made of lime and loam mixed with some coarse sand. This he lays on about an inch or two thick, bringing it up snugly to the sides of the frame all round.

The advantages of this hard mortar floor are great. It keeps the plants quite free from the bad effects of accumulated dampness, which gathers in a common frame when the pots are set on the earth. Hundreds of Carnations die off suddenly in winter from this cause, and the grower is unable to account for it. On the mortar floor they are always dry; besides this, it prevents mice from getting in the frame. These little animals are very fond of Carnations, and will, if they find their way into a collection in winter, soon devour a great number.

The frame being ready, the plants are moved into it about the middle of October, or as soon as the nights become frosty. For some days, or in short till severe weather sets in, the lights need only be put on the frame at night. In the mean time water the plants moderately, as often as they appear dry. As soon as winter commences, shut up the frame with the lights. Upon

the top of these place two layers of matting, and over all lay a large shutter or cover of rough boards.

Here they will remain till the spring opens. I think it best never to open the frame during severe freezing weather. On all fine mild dry days, during the winter, you may admit air freely to the plants, but never the sun. Raise the glass, and replace the shutter for a few hours to keep out the sun's rays. They will need but very little water during the winter, unless the weather is very mild. When, by the pots appearing dry, you observe that they do need it, supply them very sparingly. If they are kept shaded and cool, they will make little or no demand for water during the winter.

If these directions are followed, you will find your plants in excellent healthy condition at the opening of the spring. When this season comes round, admit air at the beginning plentifully, but do not let in the sun all at once, only by degrees, till the plants are able to bear it.

At the beginning of April, they must all be shifted into larger pots for blooming. The soil that should be used, I have already spoken of. I will only add, that in potting the Carnation, *the earth should always be pressed down quite firmly* around the plant with the fingers. Experience has proved to me that this is quite an essential point.

In July you will have the satisfaction of seeing your plants come into full bloom—and a sight of rare and wonderful beauty it is, if the collection is a large one. Before this time, you will have tied up every strong flower stem to a neat small stake, and you should have taken the precaution to pinch off all superabundant, weak or unnecessary buds, leaving only the strongest. The latter will then have all the juices of the plant to support them, and will come out surprisingly rich and perfect.

IV. ITS PROPAGATION.

About the middle or last of July, the beauty of the bloom will be over. Now commences the layering, to furnish a stock

of plants for the next season. New varieties of the Carnation are produced from seed; but this is a tedious process, as only one seedling in ten thousand ever turns out a first rate flower. Layering is, therefore, the mode adopted for continuing all sorts of established reputation.

It is indeed quite a simple process. The strongest and longest of the young shoots (called the *grass*) are selected. Make a small furrow in the loosened soil of the pot; bend down the shoot to find what part will be covered in the furrow; then carefully strip off the leaves of the portion to be buried. With a sharp penknife make the tongue or incision, commencing just below a joint, halving the stem by an oblique cut upward, the incision extending about an inch. Next, with a small hooked peg, fasten down the shoot in the furrow, burying the incision not more than three-fourths of an inch. Cover the whole with a little fresh soil, which should be pressed gently around the shoot, holding the top of the shoot that remains out in a nearly upright position. Give it a little water, and the whole is complete. Every evening afterwards, the layers should be regularly moistened. In about six weeks they will be ready for potting, as I have already described. The old roots, after layering, are worth little, and are usually thrown aside.

Whoever will follow these directions, cannot fail of success in growing all the finest varieties of this very choice plant.

The Picotees, generally, as I have already remarked, may be grown with very good success in a border in the open air; and I may add a few of the hardier Flakes and Bizarres. The soil may be the same as I have already pointed out for the culture in pots. In this case, I have usually found it best to allow the layers to remain attached to the parent plant all winter—enclosing the whole bed with a rough frame, a few boards and branches of evergreens thrown over the top. In the spring, a new bed should be prepared, and the layers taken off and transplanted into it.

AMONG THE TREES.

BY C. N. BEMENT.

AMONG the studies of trees we cannot fail to be impressed with their importance, not only in the beauty of landscape, but also in the economy of life; and we are convinced that in no other point of the vegetable creation has Nature done so much to provide at once for the comfort, the sustenance, and the protection of her creatures. They afford the wild animals their shelter, and their abode, and yield them the greater part of their subsistence. They are indeed, so evidently indispensable to the wants of man and brute, that it would be idle to enlarge upon the subject, except in those details which are apt to be enveloped. In a state of nature man makes direct use of their branches for covering his tent, and he thatches it with their leaves. In their recesses he hunts the animals whose flesh and fur supply him with food and clothing, and from their wood he obtains the implements for capturing and subduing them. Man's earliest farinaceous food was likewise the product of trees; for in his nomadic condition he makes his bread from the acorn and the chestnut; he must become a tiller of the soil before he can obtain the products of the cereal herbs. The groves were likewise the earliest temples for his worship, and their fruits his first offerings upon the divine altar.

As man advances nearer to civilization trees afford him the additional advantage which is derived from their timber. The first houses were constructed of wood, which enables him by its superior plastic nature, compared with stone, to progress more rapidly in his ideas of architecture. Wood facilitates his endeavors to instruct himself in art, by its adaptedness to a greater variety of purposes than any other substance. It is, therefore, one of the principal instruments of civilization which man has derived from the material world. Though the most remarkable works of the architect are constructed of stone, it was wood that afforded man that early practice

and experience which initiated him into the laws of mechanics and the principles of art, and carried him along gradually to perfection.

It is in these relations, leaving their uses in economy and the arts untouched, that we would now speak of trees. We would consider them as they would appear to the poet and the painter as they are connected with scenery, and with the romance and mythology of Nature, and as serving the purposes of religion and virtue, of freedom and happiness, of poetry and science, as well as those of more taste and economy. We are persuaded that trees are closely connected with the fate of nations, that they are the props of industry and civilization, and that in all countries from which the forests have disappeared the people have shrunk into indolence and servitude.

Though we may not be close observers of Nature, we cannot fail to have remarked that there is an infinite variety in the forms of trees, as well as in their habits. By those who have observed them as landscape ornaments, trees have been classified according to their shape and manner of growth. They are round-headed, or hemispherical, like the oak and the sycamore; pyramidal, like the pine and the fir; obeliscal, like the arborvitæ and lombardy poplar; drooping like the white elm and the weeping willow; and umbrella-shaped like the palm. These are the natural or normal varieties in the form of trees.

Of the round-headed trees that extend their branches more or less at wide angles from their trunk, the oak is the most conspicuous and the most celebrated. To the mind of the American, however, the oak is far less familiar than the elm as a way-side tree; but in England this tree, which formerly received divine honors in that country, is now hardly less sacred in the eyes of the inhabitants on account of their familiarity with its shelter and its shade, and

their ideas of its usefulness to the human family.

It is remarkable for the wide spread of its branches and its broad shade—for its suggestiveness of power, and consequent expression of grandeur. It is allied with the romance of early history; it is celebrated by its connexion with the religion and religious rite of the Druids—with the customs of the Romans, who formed of its green leaves the civic crown for their heroes, and who planted it to over-shadow the temple of Jupiter; and many ancient superstitions give its name a peculiar significance to the poet and the antiquary. From its timber marine architecture has derived its most important aid, and it has thereby become associated with grandeur of commerce and the exploits of a gallant navy, and is regarded as the emblem of naval prowess. The oak, therefore, to the majority of the human race, is beyond all other trees, fraught with romantic interest, and invested with classic and historical dignity.

The American continent contains a great many species of oak in its indigenous forest. Of these the white oak bears the most resemblance to the classical tree, in its general appearance, in the contorted growth of its branches, and in the edible quality of its fruit. But the red oak, the most northerly species, exceeds all others in size. No other attains so great a height, or spreads its branches so widely or surpasses it in regularity of form. As we advance South, the white oak is conspicuous until we arrive at North Carolina, where forests and waysides exhibit the beautiful evergreen oak, which with its slender undivided leaves, the minute subdivisions of its branches, and its general comeliness of form would be mistaken by a stranger for a willow. A close inspection, however, would soon convince him that it has none of the fragility of the willow. On the contrary, it is the most noted of all the genus for its hardness and durability, being the identical Live Oak which has supplied our navy with the most valuable of timber. At the South the

Evergreen Oak is a common way-side tree, mingling its hues with the lighter green of the Cypress and sombre verdure of the Magnolia.

The oak exceeds all other trees, not only in actual strength, but also in that outward appearance by which this quality is manifested. Hence it is regarded as the Monarch of trees, surpassing in all those qualities that indicate nobleness and capacity. It is the emblem of strength, dignity, and grandeur: the severest hurricane cannot overthrow it, and by destroying some of its branches, leaves it only with more wonderful proofs of its resistance.

THE CHESTNUT

Is one of the most majestic trees in the American forest, remarkable, like the oak, for its broad extent of shade. In some part of the country it is one of the most common standards in the field and pasture, having been left unmolested on account of the value of its fruit and the comparative inferiority of its timber. The foliage of this tree is dense and flowing and peculiar in its arrangement. The leaves are clustered in stars, of from five to seven, on short branches that grow from one of greater length. Hence, at a little distance, the whole mass of foliage seems to consist of tufts, each containing a tassel of long pointed leaves, drooping divergently from a common centre of the leaves in the same manner, and by their silvery green lustre giving pleasing variety to the darker verdure of the whole mass.

THE HICKORIES.

There are few vegetable productions of any country which unite so many valuable properties as our hickories or walnuts. Entering as they do so largely into the composition of our woods and forests they contribute to adorn our landscape scenery, supply us with a delicate condiment in their fruit, and from the wood they add very essentially to our domestic comfort, and furnish a material of the highest utility in various arts and manufactures. The prodigality with which it has been applied to

these various purposes has had the effect of rendering the above stores of these valuable trees comparatively scarce of late years, as might be expected, and we may have ere long to lament the extermination of most of the kinds unless some measures or means are resorted to of reproducing them, or a greater degree of economy should be employed in their consumption.

The hickories are valuable timber trees, with large compressed leaves, having from five to fifteen, but usually not more than eleven leaflets. Its fruit is a large roundish nut, the husk of which opens, partially or wholly, of itself by four seams.

The hickory is peculiar to America. The nearest approach to it is the European Walnut. In many respects it is amongst the most valuable of our trees. It is always a stately and elegant tree; and the several species exhibit so great a variety of appearance and foliage, that they have almost the interest of a forest. Few trees contribute so much to the beauty of the woods in the autumn. The colors of all at that season are rich, and each species has its own. The smoothness, closeness, and hardness of the grain of the wood give it great value in the arts, and for fuel it holds unquestionably the first place. The fruit of some of the species, even in the unimproved condition of its forest state, vies with the best of foreign nuts, and it is destined, doubtless to be greatly improved by the resources of cultivation.

The Pig-nut Hickory is one of the largest trees in the United States, and is most abundant along the Atlantic States. Its nut is very small, and the shell so hard and thick as to render it of no value. The wood, however, is extremely valuable, as it is considered by manufacturers to be the hardest of the hickory tribe, and strongest, and is in much request for such uses as require strength and tenacity. It is much used for screws, cogs of mill-wheels, rake-teeth, axles, and handspikes, for which purpose it is particularly well adapted. Hoops for casks and barrels are always made with us of the young hickory, and it is beyond calculation what quantities are consumed for this object and exportation. For fuel there is no wood which approaches it, and the unlimited consumption of it for this purpose, together with the destruction of the young saplings for hoops is rapidly causing its extermination. Very little attention, as yet, has been paid in cultivating it, though for the sake of preserving its timber, and the excellence of its fruit, it deserves the care of proprietors of lands. They can easily be raised from seed, but it is necessary to plant the nuts while fresh, and soon after they have fallen from the tree, they otherwise lose their power of germination. It is very difficult to increase them by transplanting, as they seldom survive their removal.

CITY MARKETS.

THE condition of our markets, the facilities afforded for daily providing, the supply and quality of food, and the cost, are matters the of greatest importance to every householder in our city. The economical question, at any time, is of larger magnitude than any of our readers, who have not given careful attention to the subject, could possibly imagine. The amount expended in any year for the products of our farms and gardens,

is enormous, and the present high prices of every article that enters into the household consumption, carry up this amount to a startling figure.

It is true that the first cost of these products—the price paid to the producer—is less in this country than in Europe, and for this reason the expenses of living here, where the quality and amount of food is the same, are less than in the European cities.

But the difference lies in this. As our system of markets is managed, or rather mismanaged, by the city authorities, nearly all our supplies come to us through the hands of forestallers and middle-men, who combine to take intolerable advantage of the consumer, and to charge enormous profits. While in every European city the authorities are exerting themselves to lessen as much as possible the price of food, especially to the industrial and laboring classes, our authorities are throwing every obstacle in the way of cheap and convenient markets, and they manage those we have entirely in the interests of corrupt officials and political hangers-on.

In the early history of our city, the markets were regarded and intended to be managed for the benefit of house-keepers who buy for their own consumption; and the Common Council, in 1735, passed an ordinance forbidding those who buy to sell again to enter any of the city markets till afternoon, so that housekeepers could provide themselves daily, during the morning at first hands; and a penalty was inflicted upon every one who violated this ordinance. But we live and suffer under a very different order of things.

And our country readers who send us their grain and cattle, their vegetables and fruits, and the products of the dairies and poultry yards, will bear in mind that they are, in no sense gainers, from the enormous profits we pay for the daily supplies of our tables. These profits go to enrich a class which stands between them and us,—a class which is of no advantage to either, and would as readily and unscrupulously overreach and cheat them as ourselves.

It is not so in Europe. Paris has twelve times the market facilities of New York and Brooklyn. In the Paris markets \$85,000,000 worth of fresh meats, poultry, game, vegetables, fruits, butter, eggs, are disposed of annually. The first cost of these articles in New York is eight and a half per cent. less than the first cost of the same articles in Paris; yet what is there

valued at \$100, is retailed to the consumer at \$124, an advance of twenty-four per cent., while in New York, the same articles costing but \$88, are retailed to the consumer for \$184.80, a difference of \$75.68 in favor of Paris on every \$100 worth of produce.

If we apply this difference to the whole amount of such articles required for the supply of New York for the year 1863, its magnitude will swell almost beyond comprehension. During that year there were supplied to New York, and slaughtered in the city, 306,179 beeves, cows and calves, 519,316 sheep, 1,101,647 swine, the aggregate dressed weight of which was 379,124,647 pounds. There were also required and furnished 54,160,671 pounds of *dressed meats*, the aggregate first cost of all which was \$35,081,184. The value of poultry, game, fish, fruits, vegetables, and other perishable food was quite as much, and probably more than of meats, amounting altogether to over \$70,000,000, and for which the consumers in New York pay over \$147,000,000. For the same amount of food the consumers in Paris would have paid only \$86,800,000, a saving to them of \$60,200,000, upon the supplies of one year. Startling as this is it is absolutely true, easily demonstrated, and beyond all contradiction.

It is well known that the up-town consumers of this city pay a much higher rate for all market articles of domestic use than the people of Baltimore, Philadelphia, and other chief cities. It is stated on good authority that the average difference between Philadelphia and New York is fully forty-five per cent. The value of market articles, in first hands, is estimated at \$70,000,000. The citizens of Philadelphia save forty-five per cent. of this, owing to their numerous, large, and convenient markets. Divide this saving among our million of population, and it amounts to \$31.50 each year, to every man, woman and child in the city. This shows that New York, and especially her industrial classes, are carrying a burden which is fast becoming intolerable.

It is time, then, we think, that this subject is taken in hand by the "Citizens," or some other association. Convenient up-town markets should be established, and the whole system of abuses by middle-men and forestallers should be swept away. The country people should have the opportunity to sell their fresh, wholesome, cheap produce directly to the citizens. A fair and honest competition would then prevail in the place of the combinations which now con-

trol prices. When we can buy at first hands, then consumers will reap the advantages of abundant crops. As it is, prices never fail to go up, when there is a scarcity of supply, or a depreciation of the currency, or any other cause to enhance cost, but they rarely fail to *stay up*. It is the business of the middle-men to monopolize the traffic, and see to it that prices never go down, however cheap the first cost of food may be.

EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Address all Communications, for the Editorial and publishing departments, to GEO. E. & F. W. WOODWARD, 37 Park Row, New York.

THIS number of the *HORTICULTURIST* closes the Nineteenth Annual Volume, and with it expires the subscriptions of many of our readers, all of whom we hope to hear from at an early day, and we hope each one will send, with his own name, one or more additional new subscribers. We can promise all, that the volume for 1865 will be well worthy of their attention. The leading article for the January number will be from the author of "My Farm of Edgewood," and articles from the same pen will appear at frequent intervals. Mr. Edward S. Rand, Jr., of Boston, author of "Flowers for Parlor and Garden," will prepare for us an article for each number of the new volume. Mr. Edmund Morris, author of *Ten Acres Enough*, Mr. A. S. Fuller, author of the *Grape Culturist*, and others, comprising the best practical talent in the country will write regularly for our columns. Other arrangements have been completed by which the general contents will be sound, able and practical, and illustrations will not be spared whenever necessary. We mean to make the twentieth volume the best of the series; we have the

talent, ability and intention to do so, and whatever we undertake to do we mean to succeed in.

WE desire to call the attention of our readers to the fact that we are now the New York Agents for all the Agricultural and Horticultural Papers and Periodicals heretofore found at Mr. C. M. Saxton's, of 5 Barclay Street, N. Y. *His list of subscribers to the HORTICULTURIST will hereafter be supplied from this office, and all renewals should be sent here.* Mr. Saxton has gone into business at St. Louis, and will act for us in extending our Western circulation. Those of our readers who wish to add to their list of Papers on rural matters, can be supplied from this office with the *Country Gentleman*, *Cultivator*, *Gardener's Monthly*, *Hovey's Magazine of Horticulture*, *Rural New Yorker*, and *American Stock Journal*, and all papers on similar subjects, at the regular subscription rates. We also keep on hand or mail post paid to any address on receipt of publishers' prices every book published on subjects relating to Agriculture, Horticulture, Landscape Gardening, Rural Architecture,

&c. Prices will be furnished for any book not on our advertised list.

AMONG THE GRAPES.—The fruit farm of Mr. Knox is situated on the south slope of Coal Hill, about a mile south of the Monongahela Bridge, and the way thereto, by a winding road which ascends the hill, is like the place the darkies sing about—a hard road to travel, as we have proved on divers occasions. It is a right fruit soil, being very strong in texture and composition, well up from bottom waters, and properly exposed to the sun. Upon this place fruits ripen early for their latitude; we visited here early in August of this year, and at that time tasted ripe Hartford Prolific, Delaware and Concord grapes from the main vineyard.

To begin with the earliest of the staple varieties, we name the Hartford Prolific, which is hardy, vigorous, and quite productive, and because of its earliness is a very profitable fruit for market, though the quality is not first-rate.

Next in season to the latter come the Delaware, Concord and Union Village. The Delaware sells entirely upon its merits. The fruit bunches were very fair, and covered the trellis with their amber clusters. The Union Village here grows to a very large size, and on account of its great size and superb style sells higher by the eye than any other variety upon the counter. The Concord is after all the great staple mid-season grape of Mr. Knox's tables. Of all the customers which we saw constantly coming in for fruit, three out of every four, (if not more,) called for the Concord, though it was side by side with the Delaware upon the same table and sold for the same price. In Mr. Knox's vineyard the Concord ripens a delicious melting pulp, a sweet and plentiful juice, with just enough of a strong aromatic smack to please the palates of people who eat with their mouths. The epicure would choose the Delaware for its delicate saccharine, dainty spirit and thin skin, and the well ripened

Catawba for its brilliant and positive bouquet, but people of good stomachs and good appetite call for the Concord, and there is no use in questioning their taste. The Concords upon Mr. Knox's trellises were a sight to behold; the vines cover the entire trellises from a foot above ground to eight feet in height, and upon his oldest vines thus trained there was a wall of purple clusters from the bottom to the top.

For an amber grape, next to the Delaware is the Diana, which makes a vigorous growth and produces very well. As a table grape the Diana is not equal to the Delaware in fineness or the Catawba in sprightliness, but as a late keeper it is superior to both. Mr. Knox says if he could have but one grape for market purposes he would choose Concord; for the second, Delaware; third and fourth, Hartford Prolific and Union Village; fifth, Diana.

The Anna is a fine white (or green) grape—indeed a sample which we took from Mr. Knox's vineyard and presented to one of our most critical pomologists in Cleveland was promptly pronounced the best specimen of the Anna he had ever tasted, and the only specimen he had ever tasted that was perfectly ripe. For amateur purposes no vineyard is complete without the Elsinboro. The bunches are long and open, the berries smaller than the Delaware, the color a deep blue-black like wild frost grapes, but with a gamy pith and spirit that tickle the palate and tempt the eater to gobble his crop full. For a person who is right fruit hungry we commend the Elsinboro. The Herbemont upon Mr. Knox's grounds is monstrously prolific; great solid bunches, ready to burst with rich red juices, hanging in ropes of clusters all over the vines. The Herbemont is too tart for a table grape, and the vine requires to be laid down and covered in winter.

We have thus gone over the leading varieties of Mr. Knox's staple crop; he has many others, too well known to need comment, or too little known to have acquired a place in pomological popularity; and now

we come up out of the vineyard with the stains upon our lips and upon our hands to show how like a cannibal we have done battle in this slaughter of the Vitian gods, or, (shall we confess to a better interpretation in our own mind,) how with gentle violence we over pressed the nectared lips of the willing goddesses who yield their ripened virgin life to give us a foretaste of the immortal. There now, we are getting sentimental again and will stop this talk lest some one should say we are full of new wine, when the truth is we are only full of ripe grapes.—*S. D. Harris, Ed. Ohio Farmer.*

A MONSTER FRUIT CAN.—The *Cleveland Herald* has the following account of a novel structure now going up in that city: "The building is eighty feet by forty-four and a half, the side walls being twenty-two feet high. The front of the building, occupying about one-fourth of the whole size, is to be used as a store, or ordinary warehouse, and will be constructed in the ordinary manner. The remainder of the building is to be walled entirely with iron, perfectly tight, and divided from the front part by similar walls. Within this enclosure is built another building, also of iron, with its walls about three feet distant from the walls of the outer building. The inner building is divided by iron walls into several smaller rooms, each of them being perfectly gas proof. The ground beneath the building was first packed with wet earth, the beams laid in coal tar, and the surface of the earth will be covered with coal tar. The space between the ground and flooring will then be packed tight with sawdust, as will be the space between the outer and inner walls, and the hollow space in the iron lined doors. Overhead will be packed tightly with ice, which will be congealed, by a peculiar process, into a solid mass of hard ice, seven feet thick.

"When all is completed the small rooms will be filled with fresh fruits, such as apples, grapes, &c., the oxygen of the atmosphere withdrawn by chemical process, and

the room hermetically sealed. The vivifying elements being withdrawn, and the temperature being kept down by the peculiar process to about thirty degrees, the fruit remains perfectly fresh, until the season for fresh fruit having passed away, a high market is open for them, when the chambers are opened as wanted, and the fruit taken out as fresh as when first gathered,

A CHINESE GENTLEMAN'S HOUSE.—He first took us to his country house, now uninhabited. It was the perfect residence of a Chinese gentleman. There was a very large garden with bamboo hedges and large fish tanks, edged with walls of blue brick, and perforated tiles. His pigs were in admirable condition, and as beautiful as the Prince Consort's at Windsor. About the grounds were nutmegs, mangosteens, plantains, coconuts, dариens, and small creepers, trained into baskets and pagodas. Inside the house the drawing room had doors sliding across circular openings. We then went on to this gentleman's private residence, entered by a Chinese triumphal gate. He tells me he has ten miles of carriage road round his estate. It is on a fine, undulating tract of land reclaimed from the jungle, and laid out with rare taste. In the outskirts a tiger killed a man the other day. In his garden I found Jacko, living in a cane cage, next door to a porcupine; there were also some rare birds. Further on some very small Berhmin bulls, a Cashmere goat, and a family of young kangaroos. There were all sorts of unknown beautiful flowers placed about in enormous Chinese vases.

Here I first saw the tea plant growing. It is of the *Camellia* tribe, three or four feet high, perhaps, and bears a small white flower, like an ordinary rose. Also I was shown the "moon flower," a kind of rounded convolvulus that only opens at night. There was a bower of "monkey cups," the pitcher flower which collects water, and from which Jacko refreshes himself in the jungles. The fan palm produced water by being pierced with a penknife, of a clear, cold quality.

Several minute creepers were trained over wire forms to imitate dragons, with egg shells for their eyes; and there were many of the celebrated dwarf trees—the first I had seen—little oaks and elms about eighteen inches high, like small, withered old men. The house here was superbly furnished in the English style, but with lanterns all about it. At six the guests arrived—mostly English—all dressed in short white jackets and trowsers. The dinner was admirably served, in good London style, and all the appointments, as regarded plate, glass, wines, and dishes, perfect. The quiet, attentive waiting of the little Chinese boys deserved all praise. After dinner we lounged through the rooms decorated with English prints of the Royal family, statuettes, curiosos from every part of the world, and rare objects in stone and china.—*Chinese Letter.*

LANDSCAPE GARDENING.—Mr. H. H. Hunnewell has given the sum of \$2,000 to the Massachusetts Horticultural Society as a fund for the encouragement of the art of landscape gardening. Mr. Hunnewell, in his letter to the society, hopes the money will be an acceptable addition to the means of the society, "in meeting a want not now supplied, and will tend to the dissemination of a more correct and refined taste for elegant rural improvements than now exists, in laying out and planting our country places, which, he fears, are often the result of chance rather than any well directed plan."

AUTUMN LEAVES.—Chromo Lithographers, with artistic pencil and inks, endeavor to imitate the beautiful colors and tints of the dying foliage, and those who buy, exclaim in ecstasies, "How beautiful." But how dull and tame they look to one who can every year see thousands of acres of uplands and lowlands glowing in the sunshine, fresh tinted and colored by the inimitable hand of Nature. To look along the slopes of hills and vales and see nothing but a

rolling sea of green, purple and gold, is a sight most beautiful, upon which to feast the eye and soul. It is a feast that kings seldom sit to, and one that we regret so few enjoy. During the next three or four weeks our foliage will present the most beautiful appearance imaginable, changing slowly from green to golden yellow, and then passing away almost in a day. We notice the past week the appearance of the first changes on the maples lining the hill sides; one a deep brilliant scarlet red, and another a soft pale yellow. Another week or two and the forests of the whole country will wear a holiday dress, reminding us of the flight of time and the approach of winter.—*N. Eagle, Pa., Sept.*

We can furnish three sets of the *Horticulturist*, from 1854 to 1865, inclusive, twelve volumes, uniformly bound in cloth, for Twenty-five Dollars.

Also, unbound volumes for 1858, 1859, 1860, 1861, 1862. One set only, each having twelve handsomely colored plates of Fruits and Flowers, originally published at Five Dollars per volume. Price for the set \$15; bound in morocco, \$20, the last set with colored plates that can be had, a splendid present. Also, a few volumes of 1856, bound and post paid, for \$2 per volume.

ONEIDA COMMUNITY.—In the notice, last month, of the Preserved Fruits put up by this Community, the statement of the number of members in the family, and the number of acres owned by them, was not correct. We give it now from the "Circular," a weekly paper published by a branch of this Community at Wallingford, Conn.

"The present number in the family at Oneida is about two hundred and thirty. They own about five hundred and fifty acres of land. It can hardly be said at present that Horticulture is their principal pursuit, though it is a leading business. For some years past their principal pursuit has been manufacturing. Next to this has been fruit-growing, and after that general farming. In

connection with fruit-growing, fruit-preserving is gradually advancing to the position of a leading business, and we have no doubt the artists in that department will continue to merit the praise, that 'whatever they do, they do well.'"

The Community have opened a place of business at No. 40 Reade Street, in this city, for the disposal of their products and manufactures, and when we are in want of anything they have to dispose of, shall give them a call.

BINDING.—We bind all volumes of the *HORTICULTURIST* at this office, in any style required. Volumes for 1864 in uniform cloth bindings, will be exchanged for the numbers, if in good order, and without delay, for Seventy-five Cents each. Uniform cases or covers for any volume or year, in cloth will be sent, post paid, to any address on receipt of forty cents, these can be put on by any binder.

Country Gentleman, Cultivator, Gardener's Monthly, Hovey's Magazine, and other Periodicals bound in any required style.

WANTED—Ten Copies Downing's Landscape Gardening, Sargent's edition, in good order, send price to this office.

CATALOGUES, &c., RECEIVED.

SELECT list of Bulbous Flower Roots for sale by Henry A. Dreer, Seedsman and Florist, No. 714 Chestnut Street, Philadelphia, very full and complete, with prices.

GRAPE VINES—Description of stock of Vines for sale at Iona Island, with some account of our four best hardy kinds. C. W. Grant, Iona, near Peekskill, N. Y.

This includes the Iona to which was awarded the \$100 prize offered by Horace Greeley.

WHOLESALE Catalogue of Fruit, Evergreen and Ornamental Trees, Shrubs, Stocks, Roses, &c., for Autumn of 1864 and Spring of 1865, offered for sale by John Saul, Washington, D. C.

S. BOARDMAN & Co., Rochester, N. Y. Circular. The Honey Locust for Hedges.

PARSONS & Co., Flushing, N. Y. Trade prices of Nursery stock for autumn, 1864, and descriptive catalogue of fruit and ornamental trees, shrubs, vines, roses and exotic plants, cultivated and for sale at the commercial garden and nursery of Parson's & Co., Flushing, Long Island, near New York.

PRICE LIST for Autumn of 1864 of Trees, Vines, Plants, Shrubs, &c., at Newburgh Nursery Depot, by Dr. W. A. Royce, No. 110 Water Street, Newburgh, N. Y. Dr. Royce is prepared to supply propagators and the trade generally with buds of all varieties of Grapes, including those but recently introduced, and is prepared to fill large or small general orders for all classes of Nursery Stock.

THE ATLANTIC MONTHLY.—The November number of this valuable periodical contains as usual articles of great merit and value, the last of the House and Home Papers is specially valuable, and is worth reading by every one who has, and every one who contemplates having a home, we are glad to know that Messrs. Ticknor & Fields will soon publish all of the House and Home Papers, in one volume. The price of the Atlantic Monthly is Four Dollars per annum, and is a first class investment for all who wish for sound, instructive and interesting reading matter.

THE AMERICAN AGRICULTURIST,—a monthly Journal for the Farm, Garden and Household, published by Orange Judd at 41 Park Row, New York, for One Dollar and Fifty cents per annum after Dec. 1, 1864. This paper has the largest circulation in the country, among Agriculturists, ranging somewhere in the neighborhood of 100,000 copies. The matter is all practical, fully illustrated, and treats on all subjects interesting to those who cultivate the soil.

TUCKER'S ANNUAL REGISTER OF RURAL AFFAIRS, for 1865, being No. 11, of a very valuable and profusely illustrated series of annuals. This number contains 130 engravings, illustrating articles on Country Homes, Monthly Calendar, Pruning, the Turkey, a Sheep Barn, Bee Management, Farming items and suggestions, Household Management, Rural and Domestic Economy, Cheap Piggery and Corn House, the Orchard and Garden. The chapter on Pruning gives the most complete, simple, and effective directions. Nine numbers of the series are printed on finer and larger paper, and handsomely bound in three volumes, at \$1.50 each. The Annuals for 1864 and 1865, Thirty cents each, or any single number of former years can be had. We mail them prepaid to any address, from this office, on receipt of price.

COUNTRY GENTLEMEN.—One of the best weekly agricultural papers in the country, entirely devoted to this subject. Its corps of correspondents throughout the land, embrace the best agricultural writers we have. It is ably edited and valuable to all who own a home or who are interested in any department of cultivation, there is no better, safer and more profitable mode of investing money than to subscribe for a paper of this character.

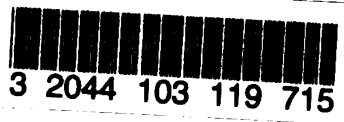
A NEW MAGAZINE.—Messrs. Ticknor & Fields of Boston, announce that they will shortly begin the publication of the new illustrated juvenile magazine entitled "Our Young Folks," for Boys and Girls, to be published monthly, and conducted under the editorial charge of J. T. Trowbridge, Gail Hamilton, and Lucy Lartom, with a staff of contributors embracing many of the best known and most popular writers of juvenile works in America and in England. The very high standard to which these publishers have brought the "Atlantic Monthly," is a sufficient guarantee that they will do well whatever they undertake to do, they evidently intend to publish the most able and valuable Juvenile Magazine

in the country, and from their well-known reputation and ability, we should have no hesitation in subscribing at once, without caring to see a specimen copy in advance. The price will be Two Dollars per annum, with the "Atlantic" Five Dollars per annum.

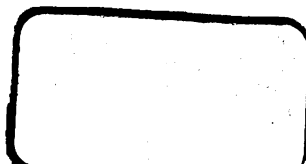
HOVEY'S MAGAZINE OF HORTICULTURE.—The three great cities of this country each boast of a Horticultural Magazine, devoted exclusively to Horticulture and its connected employments. New York has the *HORTICULTURIST*, Philadelphia the *Gardeners' Monthly*, and Boston, "the hub of the universe," the only city on the continent that is building a Horticultural Hall, and able to pay for it, has *Hovey's Magazine of Horticulture*, the oldest periodical of all, which is just closing its thirtieth annual volume, and from first to last under the same editorial management. This is distinct from the *HORTICULTURIST*, and the *Gardeners' Monthly*. The three Magazines are published in different latitudes, and view subjects from different standpoints; they are sound, able and permanent, and good horticulturists take them all. Publication price of each Two Dollars per annum. Two of them Three Dollars and Seventy-five Cents. All three, Five Dollars and Fifty Cents.

GARDENERS' MONTHLY.—This popular periodical commences its seventh annual volume with the New Year, is devoted to Horticulture, Gardening, and kindred pursuits, under the editorial management of Thos. Meehan, Esq. Its matter is nearly all original, with copious selections from the foreign journals and is distinct from the *HORTICULTURIST*. Published by W. G. P. Brinckloe, Philadelphia, at Two Dollars per annum. We mail it from this office with the *HORTICULTURIST* for Three Dollars and Seventy-five Cents per annum.

VOLUME 1853 WANTED.—Subscription for 1865 and 1866 will be given for this volume if mailed to this office prepaid.



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